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AN ANALYSIS OF PROPOSED CONTRACTOR PROVISIONING OF THE F-18 AIR--ETC(U)

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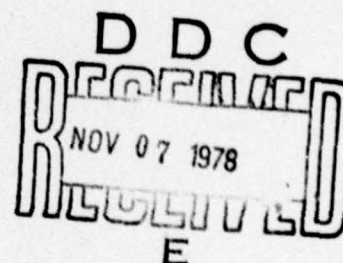
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Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

The initial provisioning of the F-18 aircraft by the prime contractor in lieu of by the Aviation Supply Office, Philadelphia, Pa. has been proposed. This thesis provides an analysis of the Provisioning Requirements Statement (PRS) prepared to contractually obligate the prime contractor to perform the provisioning. Externalities affecting the move towards contractor provisioning are discussed. The provisioning of the F-18 by the contractor is concurred with in principle, but it is recommended that the PRS be reviewed to ensure clarity and full understanding of specific PRS paragraphs as identified in the analysis.

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I. INTRODUCTION

Evolution or revolution? Policies, procedures, fashions and car models change on a regular basis. Whether a change or alteration is interpreted as evolutionary or revolutionary usually depends on a person's point of view. In the monumental effort of acquiring a new weapon system for the Navy responsible individuals frequently revise and alter policies and procedures to arrive successfully at a specified objective. One of the many objectives in the acquisition process is to adequately provision the weapon system.

Provisioning is defined as a management process for determining and acquiring the range and quantity of spares and repair parts necessary to maintain and operate a weapon system for an initial period of time. Traditionally, in the aviation community the Aviation Supply Office (ASO), Philadelphia, Pennsylvania, has been tasked by the systems command to be the provisioning director for new aircraft.

It is in the provisioning process that some changes, evolutionary or revolutionary, are being pursued. In the past ASO has determined the quantities of spares and repair parts for new aircraft support; however for the F-18, the Navy's newest fighter aircraft, provisioning by the prime contractor has been proposed in Ref. 1. This proposal is being closely watched and examined. The gain or loss to be realized could impact operational readiness, operational costs, and it could also revolutionize and perhaps streamline the provisioning process.

A. INTENT OF THESIS

Numerous innovations and changes to established procedures have been developed to contractually obligate the F-18 prime contractor, McDonnell Aircraft Corporation (MCAIR), to perform the provisioning function. Additional innovations are being implemented throughout the F-18 program, an example being the increased emphasis on reliability and maintainability, and these innovations will be considered in the provisioning process.

The intent of this thesis is to examine the proposed provisioning procedures. The analysis includes recommendations for change to the proposed procedures. Moreover, critical review points in the provisioning process are identified.

B. IMPORTANCE OF OBJECTIVE

Anything new contains some amount of uncertainty whether it is categorized as evolutionary or revolutionary. In view of the millions of dollars expended annually for weapon system support it is imperative that all personnel involved identify methods to reduce these costs. Contractor provisioning versus Navy/ASO provisioning may be one way of reducing acquisition and possibly support costs, improve or streamline the acquisition process, and improve the overall acceptance and availability of the weapon system. It is believed that any new proposal should be thoroughly examined within the time constraints prior to implementation so as to ascertain and identify as far as possible the relative strengths, weaknesses, benefits and costs of the system.

C. RESEARCH METHODOLOGY

A thorough search was conducted of the files at the Naval Postgraduate School and the Defense Logistics Studies Information Exchange with respect to their holdings in the provisioning areas. Relevant materials were obtained from both sources. Pertinent Department of Defense (DOD), Navy, Naval Air Systems Command (NAVAIRSYSCOM), and ASO directives relative to the provisioning of weapon systems were reviewed and studied.

Two trips were made to ASO and MCAIR where extensive interviews and discussions were held with various weapon's managers, logistic planners, and supply support personnel. Additionally, numerous telephone discussions were held with personnel of the F-18 Project Office, ASO, and MCAIR St. Louis, Missouri.

D. SCOPE OF THESIS

This thesis is limited in scope primarily to an analysis of administrative and management procedures of the proposed F-18 provisioning process. One assumption made is that the funds required to implement the proposed procedures are or will be available. Due to the fact that at the time of writing this thesis the F-18 program was in the advanced development phase of the acquisition process no analysis of funds required to procure the provisioning service is provided. The process discussed and analyzed was in the planning stage and was being considered as an official amendment to the F-18 procurement contract.

II. OVERVIEW OF PROVISIONING

Military readiness is a basic fundamental of national security. Readiness in itself has been identified, discussed, and analyzed in a wide variety of ways depending on the perspective of the individual and organization involved. There are camps who propose the United States spend all her resources on a few very sophisticated weapon systems and by doing so will have a strategic advantage over all adversaries. Another position being to invest all resources into several proven less sophisticated weapon systems.

No matter which action is taken there is at least one item in common - both types of weapon systems must be adequately supported to perform their mission. Modern technology has not relieved the necessity of buying spares or repair parts for operational support. As technology has advanced the number of items in a weapon system has also increased. Appendix A on page 48 provides data to highlight the significant increase in items considered in provisioning of aircraft by ASO over the past 30 years.

It has been recognized that support problems and deficiencies can be limiting factors on the operational capability of a system. Unlike the past, where logistic considerations were made after an item was produced and placed into service, the current concept emphasizes the importance of trading off operational and support requirements at the very beginning of the life cycle. Reference 2, the Naval Material Command

Implementation Guide for Integrated Logistic Support (ILS), requires the integration of logistic support considerations into the conceptual planning and through the design process of a weapon system. Reference 3, DOD Directive 4100.35 series, states that "over the life cycle of a system, support represents a major proportion of the total cost, and is sometimes the principal cost item." The objective is to reduce operation support costs without a degradation of operational availability.

In an effort to manage support costs the Department of Defense introduced the concept of Integrated Logistic Support (ILS) with the issuance of DOD Directive 4100.35. Implementing directives were subsequently issued by the Department of the Navy. The ILS concept as developed has essentially three purposes:

1. To insure all designated elements of support are identified and provided for early in the hardware development cycle.
2. To insure that the hardware is capable of being maintained by personnel on board and reliable enough to meet operational requirements.
3. To consider possible cost and/or performance trade-offs early in the development cycle.

ILS has been identified as a critical element in life cycle management. This implies that logistics planning should begin with initial design of the weapon system. Early interface between the design engineer and logistician is thus recognized as being essential.

The recognition that logistic costs are fixed by the weapon design has resulted in DOD emphasis on trade-off evaluation for determining and achieving design characteristics of the end item which reduce the logistic support burden. To achieve this goal the Logistic Requirements Analysis begins early in the life cycle during the specification writing and concept formulation. At this point it is less costly to rectify mistakes and adjust design objectives. The trade-off studies are more meaningful since they influence a broader set of specifications and the operational and support levels.

In making support trade-offs, it is imperative the analysis address operational needs that cover specific elements. These elements are defined in DOD Directive 4100.35G as:

1. Maintenance Plan
2. Support and Test Equipment
3. Supply Support
4. Transportation and Handling
5. Technical Data
6. Facilities
7. Personnel and Training
8. Logistic Support Resource Funds
9. Logistic Support Management Information

The major output of the Logistic Requirement Analysis is a maintenance plan which provides the foundation for coordinated provisioning action by both the customer and the contractor's organization.

Provisioning planning is an integral part of ILS planning and is required to commence early in the program. The ASO Provisioning Manual, Ref. 4, states: "It (provisioning) should not be an after thought, after contract award, but a definitive plan as part of the total ILS plan."

To insure the above objective a viable organization is established to execute the provisioning requirements. Figure 1 provides an overview of the Navy provisioning organization. As new operational requirements/weapon systems are established by the Chief of Naval Operations (CNO), the Chief of Naval Material (CNM) assigns an Acquisition Manager (AM) and the AM assigns a Logistic Manager (LM). The LM establishes a Logistics Requirement Generation Team, and it is on this team that the coordination for provisioning actually begins.

ASO assigns a Weapons Manager to the team. His initial responsibility is to prepare a Supply Support Management Plan (SSMP) which is a list of supply support milestones leading up to the Navy Material Support Date (MSD). (Navy MSD is the date on which the Navy Supply Systems Command/Inventory Manager assumes entire logistic responsibilities for a new weapon system) SSMP requirements are included in Ref. 4 and consist of the following elements:

1. Date of the budget plan including execution of the budget for long lead time items.
2. Date the Design Control Agent must be identified.
3. Date the Logistics Support Plan is required.
4. Date the Maintenance Plan and/or the basic Maintenance Engineering Analysis (MEA) data is required.

NAVY PROVISIONING ORGANIZATION

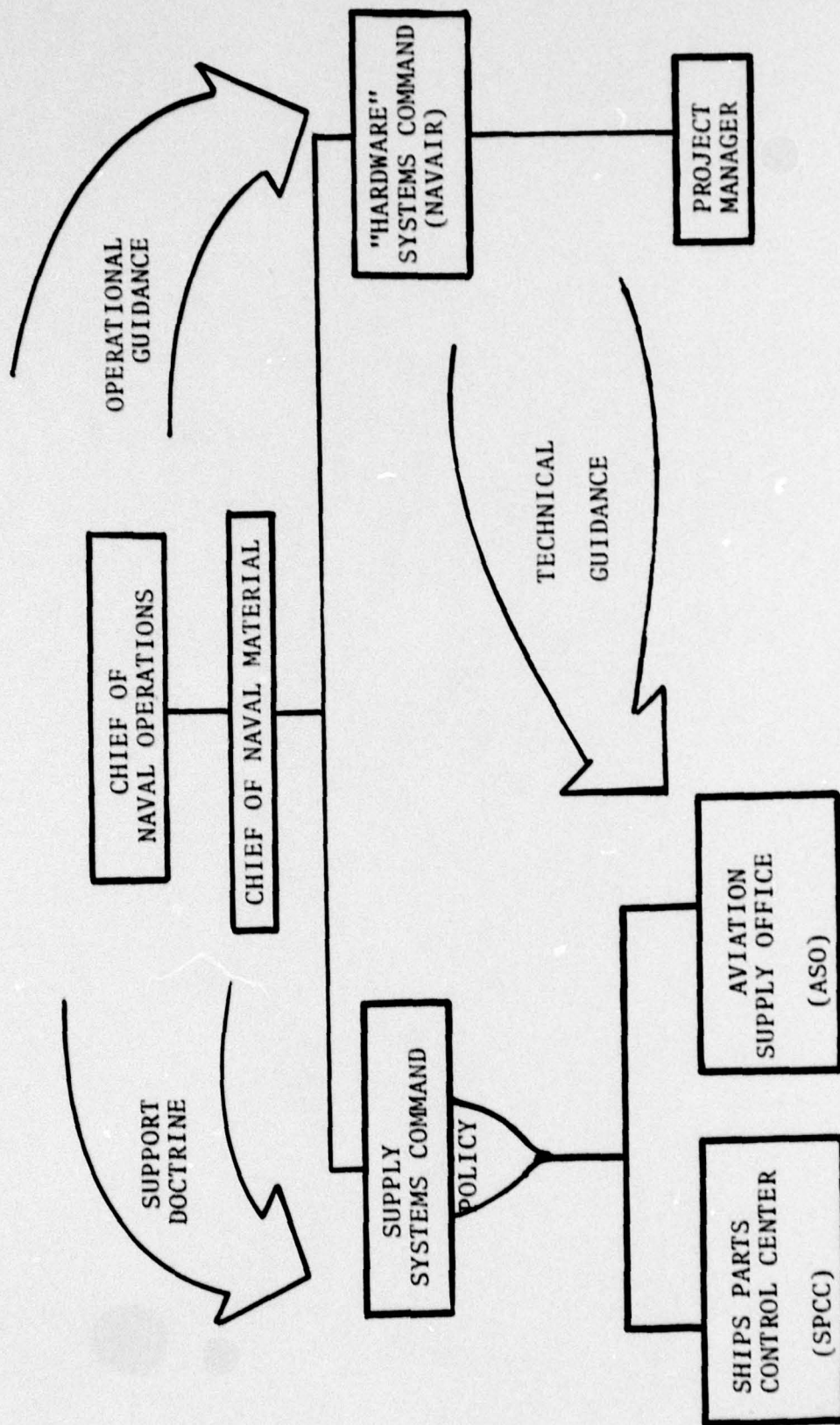


Figure 1

5. Date the Weapon System Planning Document (WSPD) is required.
6. Date of the budget plan including execution of the budget for items other than long lead time.
7. Date the depot level capability must be identified.
8. Date the ground support equipment end items must be identified.
9. Date of qualification test completion.
- *10. Date the Provisioning Requirement Statement will be released.
- *11. Date probe/pre-provisioning conferences will begin.
- *12. Date technical documentation required.
- *13. Date provisioning conference(s) begin and spares/repair parts will be identified.
- *14. Date Supply Support Request will be initiated.
- *15. Date National Stock Number requests will be initiated.
- *16. Date for spares/repair parts order award for long lead time items.
- *17. Date for spares/repair parts order award for other than long lead time items.
18. Date final MEA is required.
- *19. Date of Transition Conference, if applicable.
20. Date of positioning of spares/repair parts/GSE.
- *21. Proposed material support date.

Items 10 through 17, 19, and 21 above are requirements which are included in the F-18 PRS.

The ASO Weapon Manager is also a member of the team which reviews the contract proposal that includes the support plan elements. It is his responsibility to ensure that the Provisioning Requirements Statement (PRS) included with the Request for Proposal (RFP) contains specific provisioning requirements such as conference requirements, vendor/sub-contractor obligations and technical documentation requirements. The RFP also includes a requirement for the contractor to conduct a Level of Repair (LOR) analysis. DOD states in Reference 5:

LOR analysis is a justification of the decision to repair or discard the failed assembly for each anticipated maintenance action. This justification shall be provided to support the decision to repair at any maintenance level. Economic considerations are required except where over-riding, non-economic criteria can be cited. The LOR decision can affect manning levels, support equipment, stock levels, and training.

The contractor is expected to begin the LOR analysis as soon as the preliminary design is determined and to continue revising the analysis through to final hardware design approval. Decisions resulting from the LOR analysis will strongly influence the maintenance plan, weapon system effectiveness, and total life cycle cost of the system.

The ASO Weapons Manager will schedule the provisioning conference with sufficient notice to allow the contractor to submit the weapons system parts list to the Defense Logistic Support Center (DLSC) for screening. The screening will ascertain if any of the spare parts have been previously assigned a National Stock Number (NSN).

The provisioning conference chairman is the ASO Weapons Manager and the conference participants include representatives from the project office, fleet commands, Naval Air Rework Facilities, Naval Air Systems Command, and the contractor.

The provisioning team devotes its initial attention to item coding. A Source, Maintenance and Recoverability (SM&R) code is assigned to each item indicating the method of procurement, the lowest maintenance level authorized to remove and replace the item, the lowest maintenance level authorized to repair the item, and the method of recoverability. As stated in Ref. 6 by NAVAIRSYSCOM:

The initial assignment and subsequent changes to SM&R codes significantly impact upon funding appropriations, requirements determination, maintenance, publications, supply support, and all of the other elements of logistics support as well as operational readiness. Minimum adverse impact requires centralized planning and control to provide uniform policies, procedures, interpretation and application of all SM&R codes.

Once items are coded, the provisioning team turns to the analysis of failure predictions. Equipment reliability estimates are furnished by the contractor as results from testing during operational testing and augmented support periods. The team must decide to accept or degrade the contractor's failure predictions from which the team computes the Maintenance Replacement Factors and Rotatable Pool Factors that are integral parts of the inventory selection procedure.

This type of manual provisioning process historically has involved a large number of people for a period of time, up to one year, depending upon the equipment or system being

provisioned. In essence, when assigning the SM&R codes the Maintenance Plan was being established.

As the complexity and cost of weapons systems increased, ASO recognized the need for better techniques and tools to accomplish provisioning. Accordingly, a mechanized concept was developed in 1971. The objective was to reduce the time required to accomplish provisioning action and improve the accuracy of the input data. Under this concept a contractor was required to provide the first four lines of provisioning transcript data as required by MIL-STD-1375 to ASO on a magnetic tape. The mechanized program also generated all constant or dependent data which reduced the number of manual entries required on provisioning transcripts.

Through this process ASO was permitted to quickly identify which items under review had been assigned to NSN and applicable SM&R code. This eliminated the need to manually and physically review those items. The provisioning conference members had a fewer number of items to review, and consequently the provisioning process was expedited. The conference decisions were then all translated to tape and applied to various optimization techniques that generated recommendations for initial procurement of spares.

Prior to the use of mechanization and optimization techniques it was not uncommon for the factors that determined allowances to be challenged by various members of the provisioning team. This resulted in lack of coordination in assignment of applicable allowances and replacement factors. It is

perceived that the result of challenges to the various factors would be determined by the most influential person present.

The implementation of the NAVAIR Maintenance Plan Program (MPP) by NAVAIR Instruction 4790.4A in 1975 altered the provisioning process. The MPP is designed to bring the provisioning process into harmony with other ILS disciplines. It was recognized that the assignment of SM&R codes impacted on many ILS elements -- supply support, publications, maintenance, funding, and requirements determination. In the past the assignment of SM&R codes had been a major function performed at provisioning conferences with or without an approved maintenance plan. Under MPP only NAVAIR would assign and approve SM&R codes and provide approved maintenance plans. The approved maintenance plan includes the SM&R codes and various factors used in the computation of requirements.

In 1974, DOD issued MIL-STD-1561 which outlines Uniform Provisioning Procedures, and MIL-STD-1552 which outlines Uniform Provisioning Technical Documentation. These MILSTDs allowed ASO to further mechanize their provisioning techniques. Consequently ASO produced a new generation of provisioning transcript which contains the majority of data requirements for provisioning and also other files they are required to maintain for reference purposes.

ASO has utilized the new transcript with a limited number of contractors for provisioning of individual subsystems. In these instances the contractor has not been required to complete the entire transcript but has been required to complete

just lines A through D of the transcript indicated by arrows in upper right hand corner of Appendix B on page 49. This has required significant training of contractor personnel on a case by case basis, but it has proven successful to date. Further expansion of this program requiring the contractor to complete the entire transcript for the F-18 aircraft is now planned.

Although the concept of total contractor provisioning of the F-18 is in the planning stage, contractor support of Navy aircraft has been successfully tested and is in effect. (This fact may lend some creditability to the capability of contractors to effectively determine adequate parts requirements for major weapon systems.) There are several aircraft in the Navy's fleet that are currently under total contractor supply support. Not all have the same type of contract coverage but the C-9B, TH-57A, and CT-29E/G contracts all require full supply support. These three aircraft are off-the-shelf procurements of commercial aircraft, and all of them operate from shore based sites. Reference 7 reports that Navy users of these aircraft are well satisfied with supply support being received. It should be noted that the F-18 prime contractor, McDonnell Aircraft, is responsible for C-9B supply support.

III. F-18 PROGRAM

A. PROGRAM PLAN AND PRESENT STATUS

The F-18 is the Navy's newest fighter/attack aircraft. It is being developed to replace the aging F-4 and eventually the A-7 aircraft. In January 1976, McDonnell-Douglas Corporation was selected as the prime contractor for full scale development. The major subcontractors include Northrup Corporation for the main structural section of the air frame, General Electric for the F-404-GE-400 engines, Litton Industries is producing the Inertial Navigation System, and Hughes Corporation is manufacturing the radar.

The Navy Comptroller General report, Ref. 8, outlines the Navy program as a planned yield of 800 F-18 production aircraft - 400 will be fighter, 310 will be attack aircraft, and 60 will be two-seat trainers. Test flights of eleven prototypes are scheduled to begin in September 1978. Delivery of pilot production aircraft numbers 12 through 20 is expected to commence in March 1980 with fleet introduction in 1981-1982.

Performance has traditionally been a major force behind aircraft development programs. The high degree of emphasis on performance has resulted in aircraft with high failure rates and costly to repair. As reported in Ref. 9 the resultant high cost of associated repair parts has not always been satisfied. The primary reasons have been an insufficient quantity of spares and repair parts were purchased as a result of fund limitations, or the actual component failure and reliability

data did not agree with prediction and experience gained in development. Reliability and maintainability are beginning to receive increased attention as direct factors affecting life cycle cost.

Accordingly, the F-18 is being developed for the Navy under the "New Look" acquisition program where reliability and maintainability are given equal weight with performance and other traditional design parameters. Reference 10 concludes that the F-18 program represents a quantum step forward toward better reliability and maintainability. The extent of impact is yet to be determined but the "New Look" will influence the quantity of spares and repair parts that will be required and subsequently procured.

The identification and determination of the range and depth of spares and repair parts to support each phase of the F-18 program is included in the ILS Plan (Ref. 11) and is as follows:

Full Scale Development: Support requirements are identified, reviewed and approved by MCAIR. In this regard, a Contractor Support Material List (CSML) consisting of approximately 2,300 line items has been identified by MCAIR logistics personnel. These items will be staged at the Patuxent River, Maryland test site in support of the eleven prototype aircraft testing. Any and all repairs required on these aircraft will be accomplished by MCAIR and subcontractors.

Pilot Production: Logistic Support Analysis (LSA) factor sheets will be utilized as a basis for MCAIR Review Board spares quantities decisions.

Limited Production: System levels, Weapon Replaceable Assembly (WRA) levels, along with Shop Replaceable Assembly (SRA) considerations will be used as input to the procurement of support resources.

Full Production: A complete LSA/Maintenance Plan will be used to support formal provisioning in accordance with Chapter 7 (Spares and Repair Parts) of the ILS Plan and the PRS.

The F-18 ILS Plan also includes procedures for phased support which extends from first flight to the date the Navy has achieved full organic maintenance and material support capability. As stated in the ILS Plan, the "... phased support concept has evolved in response to a need to better organize and manage initial support for a new weapon system." One of the considerations of the phased support plan is that spares and repair parts will be available before support responsibilities are transitioned from the contractor to a Navy support site. This concept is attractive and is a significant factor that must be considered during the provisioning process.

B. F-18 ILS ORGANIZATION

ILS has become firmly entrenched in the DOD community and many directives are available for establishing and executing its concepts. Industry has also become aware of the advantages of ILS. This awareness has prompted industry to similarly organize and become more attuned to DOD procedures. In the case of the F-18, MCAIR has an ILS organization that parallels the Navy organization.

The MCAIR ILS organization is headed by an ILS Director who reports directly to F-18 Program Management. The ILS Director is the focal point for all coordination and interface with the LM at NAVAIR. Additionally, Logistic Element Specialists (ES) representing each element of the ILS program are assigned and correspond to Navy Logistic Element Managers (LEM). Appendix C contains the NAVAIR and MCAIR F-18 ILS organization charts highlighting the similarity and compatibility of each organization.

Additionally, MCAIR has established a Logistics Requirement Group (LRG) which consists of a representative from each program support element. The LRG is responsible for assuring that the maintenance concepts generated throughout the program are integrated into all ILS support elements which includes the provisioning of spares and repair parts. The LRG is one of the central controlling elements in the provisioning process. Its interface with the approved maintenance plans is shown in Figure 2. The F-18 ILS Plan cites the following areas of involvement that impact on provisioning as applicable to the LRG mission:

- Assure development and approval of integrated maintenance concepts.

- Assure availability of the approved maintenance concepts to all support element activities (i.e. spares and repair parts).

The Navy has established a Resident Integrated Logistics Support Detachment (RILSD) at MCAIR. The RILSD is a team of technically qualified personnel who are responsible to the NAVAIR Assistant Program Manager for Logistics. A nucleus of

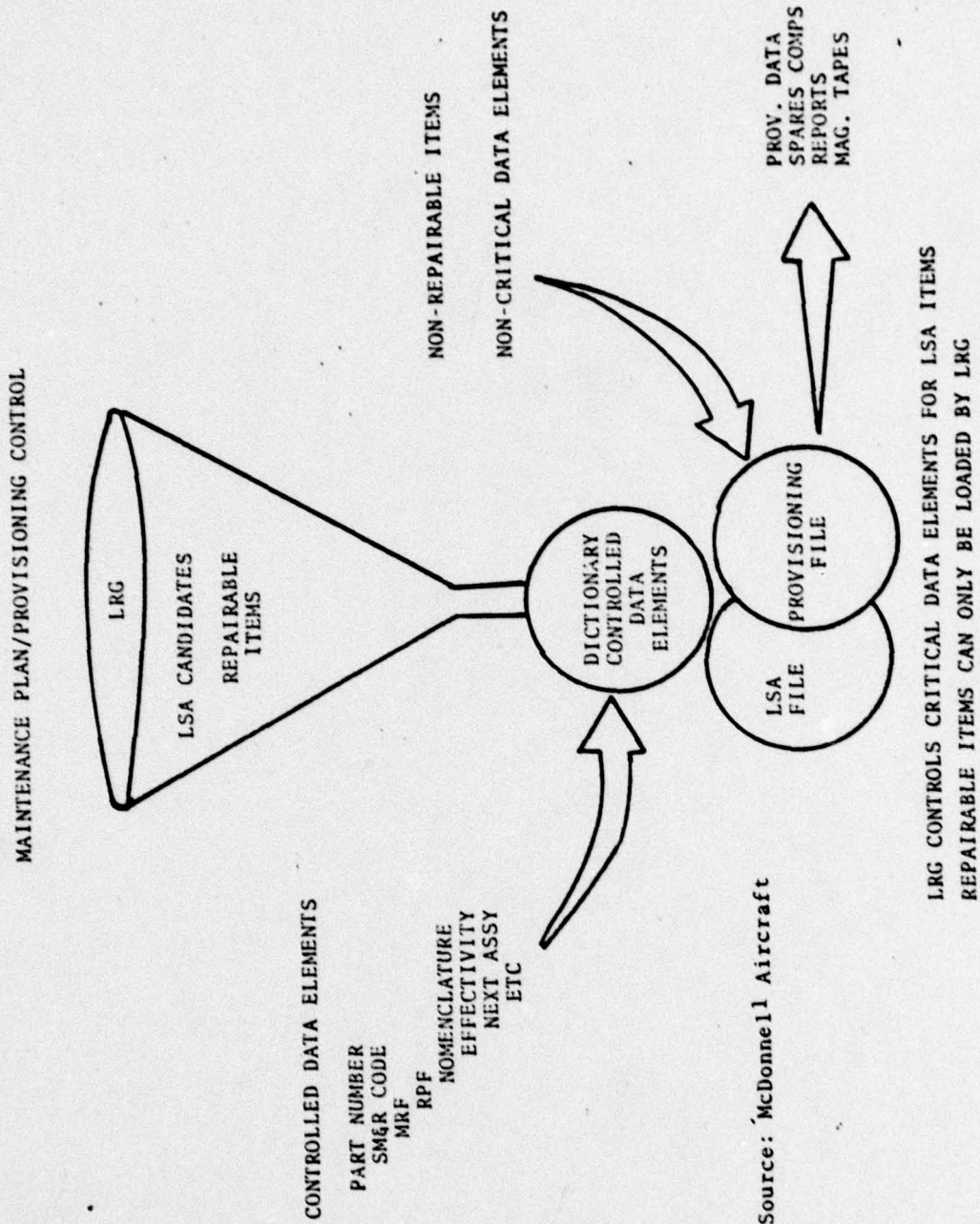
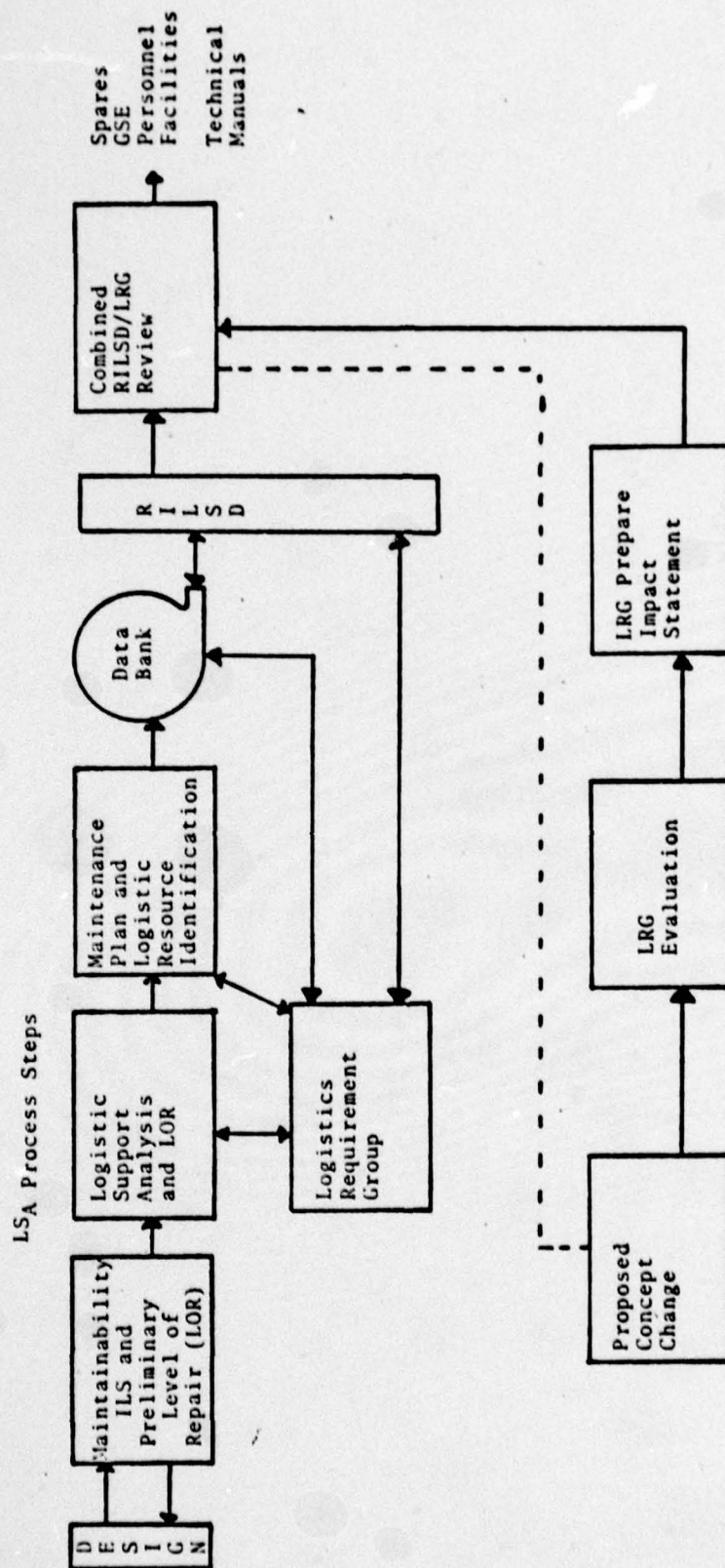


Figure 2

the RILSD is located at St. Louis while other members are "on call" and located at their respective Navy facilities. The interface between the MCAIR LRG and the Navy RILSD is shown in Figure 3.

RILSD-LRG-LSA INTERFACE



Source: F-18 ILS Plan

Figure 3

IV. F-18 PROPOSED PROVISIONING

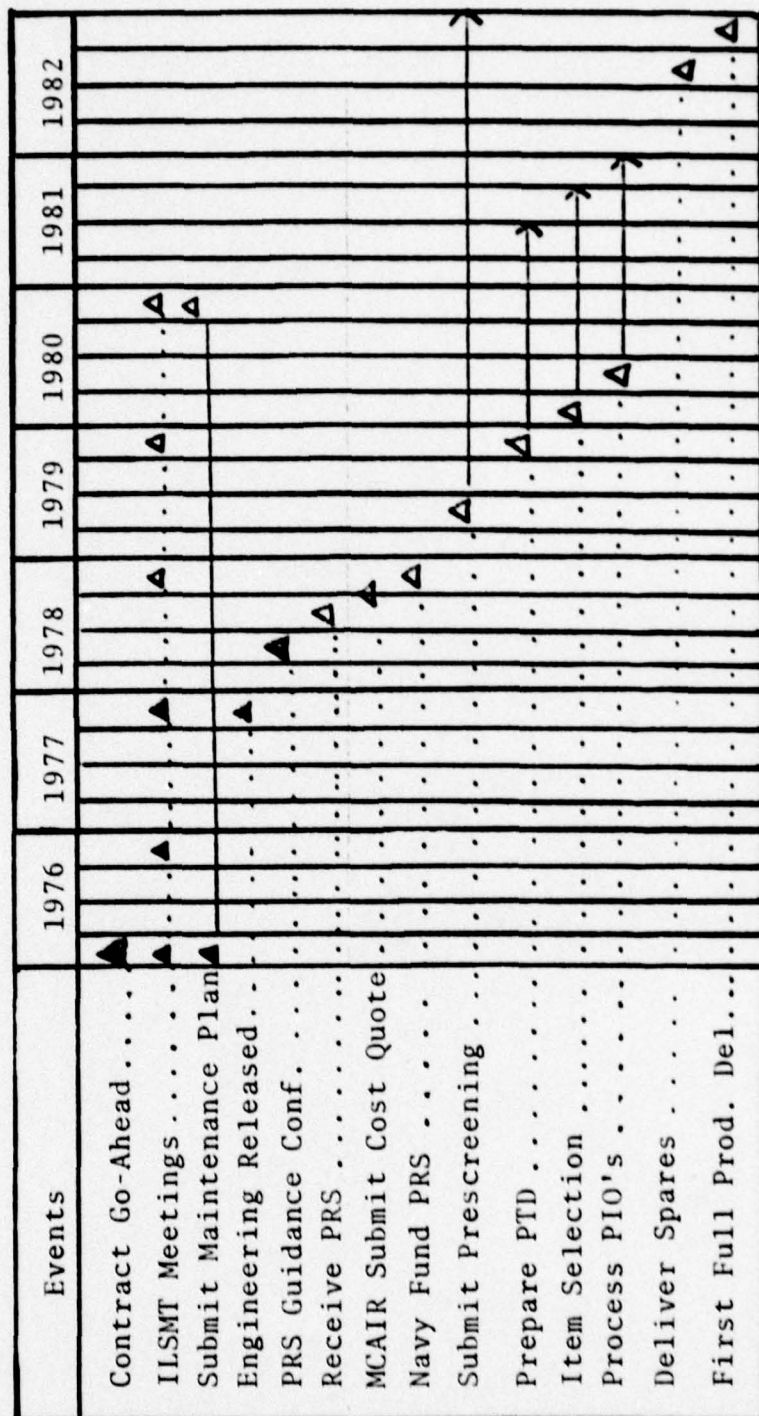
A. OVERVIEW OF PLANNED ACTIONS

In accordance with the F-18 ILS Plan ASO and MCAIR have been working together to develop the Provisioning Requirements Statement (PRS). As noted in Chapter II the development of the PRS is a primary responsibility of the ASO Weapon Manager. In the case of the F-18, ASO has not specifically assigned a Weapon Manager, however, the PRS has been coordinated and developed by senior ASO Weapons Division personnel and members of the RILSD. Presently the PRS is awaiting official Navy approval at which time MCAIR will submit a cost quotation to perform the services specified in the PRS. The proposed milestone plan for provisioning and supply support is provided in Figure 4 on page 28

The F-18 PRS is a lengthy and detailed document. It has been proposed as a Navy (ASO) addendum to the F-18 Weapons System Contract Number N000019-75-C-0424 and is dated 20 July 1978. The PRS in its entirety as of the date of this thesis is included as Appendix D.

The PRS prescribed the requirements governing the selection, cataloging, acquisition, and delivery of F-18 spares/repair parts to be procured by the Navy from MCAIR and all appropriate subcontracted items incorporated within end items manufactured by MCAIR. The provisioning of any Government Furnished Equipment (GFE) utilized on the F-18 will remain the responsibility of ASO. The proposed provisioning flow of data is shown in Figure 5 on page

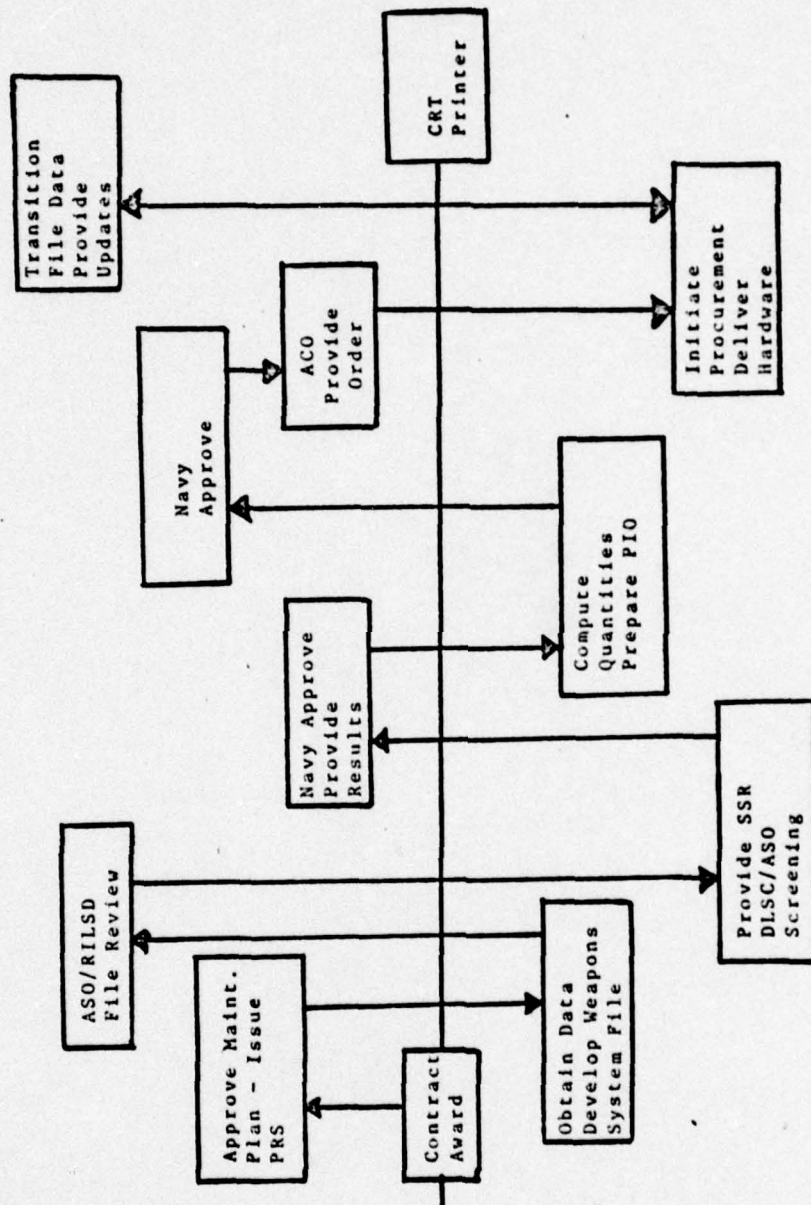
SPARES AND REPAIR PARTS MILESTONE



Source: F-18 ILS Plan

Figure 4

F-18 PROPOSED PROVISIONING FLOW



Source: McDonnell Aircraft

Figure 5

The PRS also includes procedural steps to be followed by the contractor for ordering of spares/repair parts required to support the pilot and limited production stages of the program.

A major link in the overall success of the provisioning and phased support aspects is the establishment of a system whereby ASO will have immediate access to the data being accumulated and documented by the contractor. This is proposed to be accomplished by means of a computer tie between MCAIR and ASO. It has been suggested that Cathode Ray Tube (CRT) terminals be installed at both locations.

In addition to the requirement for MCAIR to perform the provisioning functions and determine the F-18 initial support requirements there is the possibility that they will also prepare equipment and support site allowance lists. The assumption of the provisioning requirement may be classified evolutionary; however, allowance list preparation and complete outfitting of Navy sites by a contractor is considered a major departure from established practices.

Generally, a PRS is brief and would primarily cite applicable references to be complied with during the provisioning process. In contrast, the F-18 proposed PRS repeats specific requirements contained in MIL-STD-1552 (Uniform DOD Requirements for Provisioning Technical Documentation) and MIL-STD-1561, (Uniform DOD Provisioning Procedures). In addition, it incorporates proposed revisions to established procedures which are required to task MCAIR to perform the provisioning. This is considered beneficial in that any question relative to provisioning such

as procedure, documentation, or data elements can be answered by referring to one document in lieu of several.

B. ANALYSIS AND COMMENTS OF PROPOSED PROCEDURES

1. PRS Analysis

The following analysis and comments of the PRS and proposed procedures has been accomplished by a thorough review of that document, detailed discussions with ASO, MCAIR, and RILSD personnel, and a review of current written procedures relative to provisioning. The PRS is included as Appendix D, however for convenience and continuity the applicable paragraph commented on is repeated in its entirety in this section.

a. PRS paragraph 3. 20.1 states:

Spares Acquisition Integrated with Production (SAIP).
A program wherein spares/repair parts are identified and quantified in time to permit funding and procurement action concurrently with the placement of the end item production order thereby taking advantage of reduced costs and improved support material deliveries.

The SAIP program is new to Navy provisioning and acquisition, but it has been utilized by the Air Force and MCAIR in the F-15 program. SAIP has numerous advantages among which the following are considered most significant:

(1) Spares deliveries will be interspersed with production deliveries assuring correct configurations are procured for support. PRS paragraph 5.3.13.1.1 specifies the method of allocation of procurements to achieve the correct proration.

(2) Design changes will be documented to aircraft serial number and not a vendor serial number. This will allow for easier identification of correct configurations to aircraft by the using activities.

(3) Consolidation of production and spares orders assures contractor/vendor capacity to produce total requirements.

(4) Ability to use properly configured production line assets to satisfy urgent requirements when necessary.

(5) Ensures consistent maintenance concept for support elements such as publications and training is accomplished through LRG/RILSD interface.

b. PRS paragraph 4.5.1 states:

Computation of Spare/Repair Parts Quantities. The contractor shall, during the full production phase, compute quantities utilizing ASO UICP (Uniform Inventory Control Point) J14 optimization model, D52, D53 and D54. A derate procedure will be developed by the contractor and approved by the Navy to derate each applicable system for initial spares computation to match the expected degree of maturity.

This paragraph is an addition to MIL-STD-1561 provisions, and it is similar to paragraph 1.6 on page III-3-4 of the ASO Provisioning Manual, Ref. 3. The utilization of the various UICP models cited should pose no problem but identification of an "applicable system" is not clear.

It is understood that not all systems to be provisioned will have demonstrated maturity relative to reliability and estimated failure rates. Notwithstanding the contractor should be provided with and required to review available 3M data on components/systems. This should permit a more valid deration or increase in failure rates.

c. PRS paragraphs 5.1.3, 5.1.4, and 5.1.5 cite that long lead time, provisioning, and interim support conferences are "Not Applicable." These are major changes from the requirements specified in MIL-STD-1561 which are required to

accommodate the F-18 contractor provisioning philosophy.

d. PRS paragraph 5.2.4 states:

Navy/Contractor Developed Spares Selection Method. The Navy/Contractor will establish a weapon system file which when complete will include all provisioning data elements required to accomplish the objectives of MIL-STD-1561/ MIL-STD-1552 for CFE items (spare and non-spare) used on the F/A-18 aircraft, GSE and training equipment. This file maintained by the contractor will be a Navy/Contractor file and will include Navy/Contractor common data as well as any Navy data requirements subsequently negotiated. The contractor may, when contractually authorized by the Navy, utilize the file for certain provisioning efforts associated with Government furnished equipment. This effort will be contingent upon the Navy providing the necessary elements and data. The file will be periodically reviewed by the Navy representative(s) to establish confidence level in the contractor's assignment of source codes and provisioning factors in accordance with Navy approved maintenance plan packages and to insure that known and anticipated requirements are satisfied. The file will be used to store data for reference and to provide reports and status for both the Navy and the contractor. The contractor will provide the programming effort necessary to establish and maintain the file and to accomplish reports selection. The contractor will conduct provisioning of spares/repair parts for full production effort from this file.

The statement that the weapon system file "... will be periodically reviewed by the Navy representative(s) to establish confidence level in the contractor assignment of source codes and provisioning factors ..." is nebulous. MIL-STD-1561 paragraph 5.10 states that "... the Government may use 100 percent verification or a statistical sampling plan to ascertain the completeness and accuracy of PTD and SPTD." In view of the significance of the file being established it is recommended that the above referred statement be clarified for the information of the contractor and the Navy.

It is recognized that the cited tape is presently being created at MCAIR and is being reviewed on a continuing

basis through the LSA process by members of the RILSD. It may be difficult to realistically quantify a "confidence level." However ASO's past experience with similar but less significant contractor mechanized provisioning processes (such as Vought Aeronautics provisioning of the TA7C) could be a guide. In the TA7C case an accuracy and validity rate in excess of 99% was achieved. This indicates that a quantifiable goal could be established and achieved prior to MCAIR performing the provisioning effort for full production support.

e. PRS paragraph 5.3.11 states: Statement of Prior Submission (SPS). Not applicable. The SPS is submitted to indicate that the contractor has or has not previously furnished the Government provisioning technical documentation (PTD) which he believes will satisfy current requirements. The non-applicability of this is questioned in view of the commonality of some of the components/systems in the F-18 to existing systems in operation by the services. For example the radar is a duplicate of that utilized by the Air Force in the F-15. It would appear that some of the data required in the F-18 provisioning effort has been submitted to the Government and is readily available from a source therein. This data should be reviewed and utilized as applicable by MCAIR.

f. PRS paragraph 5.3.13.1.2 states:

Procurement Type Items not Procured from the Contractor. The contractor will prepare and submit timely Supply Support Requests (SSR's) for the appropriate Federal supply classes. Spare/repair parts which are stock listed will be MILSTRIP requisitioned by the contractor. If the item is not available from government sources, the contractor will initiate procurement action via the PIO in accordance with Paragraph 5.7.1.

This paragraph is not clear regarding quantities or appropriate time frames. It was determined that the above is to be utilized as guidance for MCAIR to complete initial outfittings of approved Support Material Lists (SML) for aircraft during the Pilot and Limited Production phases of the program. A more definitive time frame should also be cited in lieu of using "not available." It is believed a "Fill/Kill" type requisitioning action with a realistic Required Delivery Date (RDD) should be utilized to avoid possible duplication of government procurements and stocks. This paragraph requires clarification of what is to be ordered in addition to when and how it is to be ordered.

g. PRS paragraph 5.3.13 states:

Design Change Notice (DCN). Upon ECP approval and as engineering drawings, or engineering orders (EO's) are released, the contractor's weapon system file will be progressively updated to reflect the approved configuration changes. A Provisioned Item Order (PIO)/Supply Support Request (SSR) will be submitted within 21 days after release for fabrication or procurement, for prime contractor design items and 42 days for vendor supply items. After file transition the contractor will continue to submit updated file interface tapes reflecting design changes data in accordance with the PRS.

The procedure specified above is considered to be one of the more positive factors in this entire program. It eliminates internal processing at ASO within the Technical and Data Analysis Divisions, but more importantly the ASO item manager will have instant and accurate visibility of any changes. This will permit more effective and expeditious management of the item being changed.

h. PRS paragraph 5.7.1 states:

Provisioned Item Order (PIO). The contractor will submit PIO's for items selected in accordance with Paragraphs 5.2.4 and 5.3.7.2. The PIO will be submitted to the Navy for approval and subsequent ACO order processing. The contractor will continually evaluate usage data, minimum stock levels, end item deliveries, etc., and submit PIO's/SSR's for those items for which additional spares are required to ensure continued support. PIO's will be initiated in time to release spares for fabrication or procurement to take advantage of savings resulting from Spares Acquisition Integrated with Production (SAIP) and to ensure delivery consistent with program requirements. If concurrent delivery is required and such delivery necessitates a delay in delivery of the end items or components, an adjustment in the delivery requirements will be considered. The PIO will be approved, processed and funded to the contractor within 30 days of receipt. The Navy reserves the right to place additional orders for support items for the life of the contract.

The reference to paragraph 5.3.7.2 appears redundant in that 5.3.7.2 refers to the above paragraph. Recommend consolidation of these paragraphs.

The requirement for the contractor to, "... continually evaluate usage data, minimum stock levels, end item deliveries, etc., and submit PIO's/SSR's for those items for which additional spares are required to ensure continued support," is somewhat unclear. It was learned that this requirement is for the SML support phase up to the time when the Navy assumes support responsibilities. Recognizing that the introduction to the PRS speaks only to the full production phase of the program it is recommended that specific time frames and material quantity limitations be included for the above requirement.

The statement that, "The PIO will be approved and funded to the contractor within 30 days of receipt," by ASO may be optimistic. The review procedures specified in ASO

Instruction 4205.9F of 24 May 1977 involve a significant number of persons. Considering sick leave, annual leave and requirements for official trips away from ASO the possibility exists that the established time frames may not be met due to the absence of key personnel. It is recommended that ASO take this comment for review and identification of a potential administrative delay.

i. PRS paragraph 5.7.1.1 states:

Supply Support Request (SSR). Supply Support Request will be submitted in accordance with DOD 4140.26M or as modified by the Navy. MILSTRIP requisitions will be submitted by the contractor. If the part is not readily available from the DOD agency, the contractor will initiate a PIO and process in accordance with Paragraph 5.7.1.

It is recommended that a time frame be assigned to the phrase "readily available." The comments cited for paragraph 5.3.13.1.2 on page 35 relative to Fill/Kill requisitioning action with a realistic RDD apply.

j. PRS paragraph 5.7.2 states:

Priced Provisioned Item Order (PPIO). Within ninety (90) days after approval of the PIO, the contractor will submit to the Administrative Contracting Officer (ACO) a PPIO which will include proposed unit prices and extended unit prices.

MIL-STD-1561 specifies 60 instead of 90 days after PIO approval for the contractor to submit a PPIO. It is recognized that this provisioning concept primarily involves contractually dealing only with MCAIR versus all vendors and the additional 30 days may be required for the convenience of the Navy.

k. PRS paragraph 5.8.2.4 states:

PIO and Funds Status Reports. The contractor shall prepare and submit an Estimated Funds Summary Report and a PIO status report quarterly or as requested by the Navy. The format of the PIO status Report will be as reflected in Attachment 3. The Funds Summary Report will provide an estimate of the funds expended for the items included in the PIO Status Report.

This paragraph is an addition to the MIL-STD-1561 provisions. The funds summary report is critical to the overall management of provisioning specifically to the timely ordering of spares/repair parts. Although not specifically included in the PRS a method of management of funds for the provisioning requirements must be considered. It is recognized that the F-18 program emphasizes phased support and a floating MSD. This concept is attractive and a method to allocate available dollars for procurement of spares/repair parts as systems/components are provisioned should be established early in the process.

As spares funds are made available for a fiscal year an estimate of the requirements to be generated as a result of systems provisioned during the year must be established. One approach that could be utilized is to apply known percentages of spares dollars expended by system for a similar aircraft such as the F-14. This would provide a starting point to allocate funds throughout the year and would also be a check on total program price.

1. PRS paragraph 5.10 states:

Quality Assurance Provisions for PTD and SPTD. A magnetic test tape of the PCPL (approximately 100-150 items or the first completed repairable assembly) prepared in Figure I and Figure II format of DID DI-V-2172 (Paragraph 10.3), containing the data on cards A thru Q of the Provisioning Performance Schedule. ASO will advise the contractor of the acceptance or rejection of the tape.

This requirement is to ensure compatibility of the tape with ASO's computer. The above is a modification of paragraph 5.10 of MIL-STD-1561 which states, " ... the Government may use 100 percent verification or a statistical sampling plan to ascertain the completeness and accuracy of PTD and SPTD." It appears that the MIL-STD-1561 paragraph 5.10 is more applicable to PRS paragraph 5.2.4 which is an addition to the MIL-STD-1561 format.

2. Externalities effecting the overall system.

The following is based on discussions conducted at MCAIR and ASO during thesis research.

a. MCAIR is exhibiting a high degree of confidence in being able to accomplish the provisioning action. The personnel in the spares and technical areas are accepting the challenge and have established an in-house goal of accomplishing the task correctly and effectively.

b. Two factors attributable to ASO are encouraging more contractor involvement in provisioning. First an internal reorganization in 1974 resulted in item managers being assigned the responsibility for provisioning. Previously a Provisioning Division was an integral part of ASO and was staffed and trained to perform this function. A disadvantage to the item manager being responsible is many persons are required to be trained relative to provisioning policy and procedures. No single manager is involved in provisioning to the extent that it is a well understood process and therefore continuous training is required. Second, ASO has experienced a loss of personnel

experienced in the provisioning function. This has occurred through personnel transfers and retirements. Therefore a valuable knowledge base has been lost.

c. Policy and practices are sometimes difficult to put into words that everyone will interpret the same way. The current widespread discussion on the interpretation of OMB Circular A-109 is an example. It is also true that policy sometimes evolves from experience and is never specifically documented - simply because it has "always been done that way." In regards to provisioning it has been one policy of ASO provisioning team members to assign factors and codes to some items based on their application. This has evolved through experience in reviewing thousands of similar items. For example, a policy could be to code wing panels as insurance items which results in a very limited procurement. In the case of the F-18 a code such as this should not necessarily be automatically applied. The wing panels of the F-18 are constructed of new technology material that is more susceptible to such things as a dropped tool box and therefore more spares would be required. This knowledge must be taken into consideration during the provisioning process regardless of the policy previously applied at provisioning conferences. MCAIR personnel are aware of this type of change and proper consideration must be applied.

C. EXPECTED BENEFITS

As a result of a review of the proposed procedures the following Navy benefits have been identified.

1. An improvement in configuration control and obsolescence of spares in the supply system. This will be the result of utilization of the SAIP concept and the real time data available to ASO item managers as a result of access to the current Weapon System File at MCAIR.

2. In coordination with the phased support concept only components/systems will be provisioned for which the Navy has an established maintenance capability. As the program proceeds and changes are made to the support philosophy it will be an easier task to alter required Navy support actions. The necessity to cease provisioning actions or cancel procurements in progress that could have occurred under non-contractor provisioning efforts will not be present.

3. The contractor is required to establish many data items and provisioning factors as a result of initiating a maintenance plan. The proposed procedures take advantage of this and a duplication of effort and duplication of data is eliminated. ASO will have to train the contractor in assignment of some data elements to be included on the mechanized transcript and to review the assignment of the data elements. This effort should be significantly less than previously required at a formal provisioning conference.

4. Elimination of a formal provisioning conference. These conferences are a drain on Navy and contractor resources. They have been referred to as "a cast of thousands" that may devote up to one year to the provisioning of a system.

5. The procurement of spares for all Contractor Furnished Equipment (CFE) from the prime contractor will reduce the

administrative task of monitoring many contracts. The potential here for improved management and central control of the overall spares support/delivery phase is considered significant.

6. The provisioning process will be shortened and an earlier MSD could be realized. The elimination of the formal and lengthy provisioning conference and the early accumulation of all required data for provisioning, which has already commenced, will contribute to this reduction. This is considered an advantage with the assumption that an earlier MSD is beneficial.

D. CRITICAL REVIEW POINTS

As a result of the phased support and SAIP concepts there is a requirement to review provisioning data on a continuing basis. The following flow points from Figure 5 on page 29 are considered critical.

1. ASO/RILSD File Review. The file referred to is the master weapons file that MCAIR will develop, and it includes all data required for the provisioning. It is recognized that MCAIR is presently identifying some data elements for the file, but it is imperative that factors included such as Mean Time Between Failure (MTBF) and Mean Time Between Repair (MTBR), be updated as development and testing progresses. A check at this point should sample changes being made to the factors to ensure experience to date and any design/reliability changes have been considered. This review should commence immediately following approval of the PRS and upon completion of ASO training of MCAIR personnel involved in data element assignment.

2. Compute Quantities/Prepare PIO. The computation results will be from the use of ASO prescribed computer optimization and inventory models. The critical factor present at this point is the management of funds to effect the recommended procurement. It must be recognized that the provisioning of the F-18 will occur over a period of two and possibly three fiscal years. A management technique must be developed that can be utilized to assign an applicable percentage of the estimated total funds to be available for the procurement of specific system/sub-system allowance quantities.

V. CONCLUSIONS

1. The proposed F-18 PRS is more complete than previous PRS documents because it includes the applicable MIL-STDs, as revised by ASO, in their entirety. This will assist all personnel involved in the provisioning process to determine requirements from a single source.

2. The PRS is to be used in conjunction with the phased support plan, but PRS paragraphs 5.7.1, 5.7.1.1, and 5.3.13.1.2 are not clear regarding specific support periods.

3. The SAIP concept contained in PRS paragraph 3.20.1 has several worthy advantages previously cited on page 31. The concept is new to the Navy and must be monitored closely. The factors utilized to determine the quantities of spares to be procured must be strictly reviewed and some management decisions will have to be made early in the provisioning process to permit the award of spares contracts prior to systems reaching full maturity. MCAIR past experience with the U.S. Air Force F-15 SAIP should be called upon and used to the fullest extent.

4. MCAIR personnel will require extensive training in the use of and completion of the ASO mechanized transcript. ASO has personnel available who thoroughly understand the data element requirements and can conduct the training.

5. The proposed contractor provisioning appears to be a natural procedure to be followed recognizing the loss of the ASO provisioning knowledge base. Implementation of ILS, NAVAIR MPP, and the use of computer optimization and inventory

models are direct contributors to the evolution of contractor provisioning.

6. There is risk involved in implementation of any new procedure. The risk in the proposed procedure appears minimal because of the phased support concept. There should be less concern regarding lack of adequate spares/repair parts as of a specific date because the contractor will be assigned support responsibility until the Navy has full maintenance/material capability. With proper management the contractor will have accumulated the best mix of supply support at a specified MSD at which time the Navy will assume responsibility for spares management.

7. Contractor provisioning will put ASO in a pure management/control position as opposed to performing and managing "nuts and bolts" type actions of the provisioning process.

8. It is an assumption that any contractor will perform as required simply because of the ever present profit motive of industry. This assumption coupled with the pride that industry exhibits in their product will produce a useable and effective provisioning product. It is believed MCAIR has as strong a desire as the Navy to insure the F-18 performs as planned. This, among other factors, will be a result of provisioning for which they will be responsible.

9. The Logistics Requirement Group established by MCAIR is an excellent means of controlling and monitoring the validity and compatibility of provisioning input data and subsequent changes. It will function like a provisioning review team and should prove to be very valuable to the process.

10. The proposed provisioning procedures have been well planned. Some clarification may be required in the PRS to ensure the contractor and the Navy have a mutual understanding of all aspects of the procedures.

11. The proposed procedures are an effort to improve the provisioning process. As the Commandant of the Defense Systems Management College, RADM R. G. Freeman III, USN, stated in the March-April issue of the Program Managers Newsletter:

It is time to make a major effort to improve our acquisition process. Our environment is ready for innovative change. We have the challenge. Let's take it on, because only we who work in the system can really change it.

VI. RECOMMENDATION

It is recommended that ASO/MCAIR review the contents of Chapter IV and make changes to the PRS that are considered appropriate at this phase of the overall program.

Further analysis of the proposed procedures may be required to ensure a viable process has been established. The comments and recommendations included herein were prepared within established time and fiscal constraints.

APPENDIX A

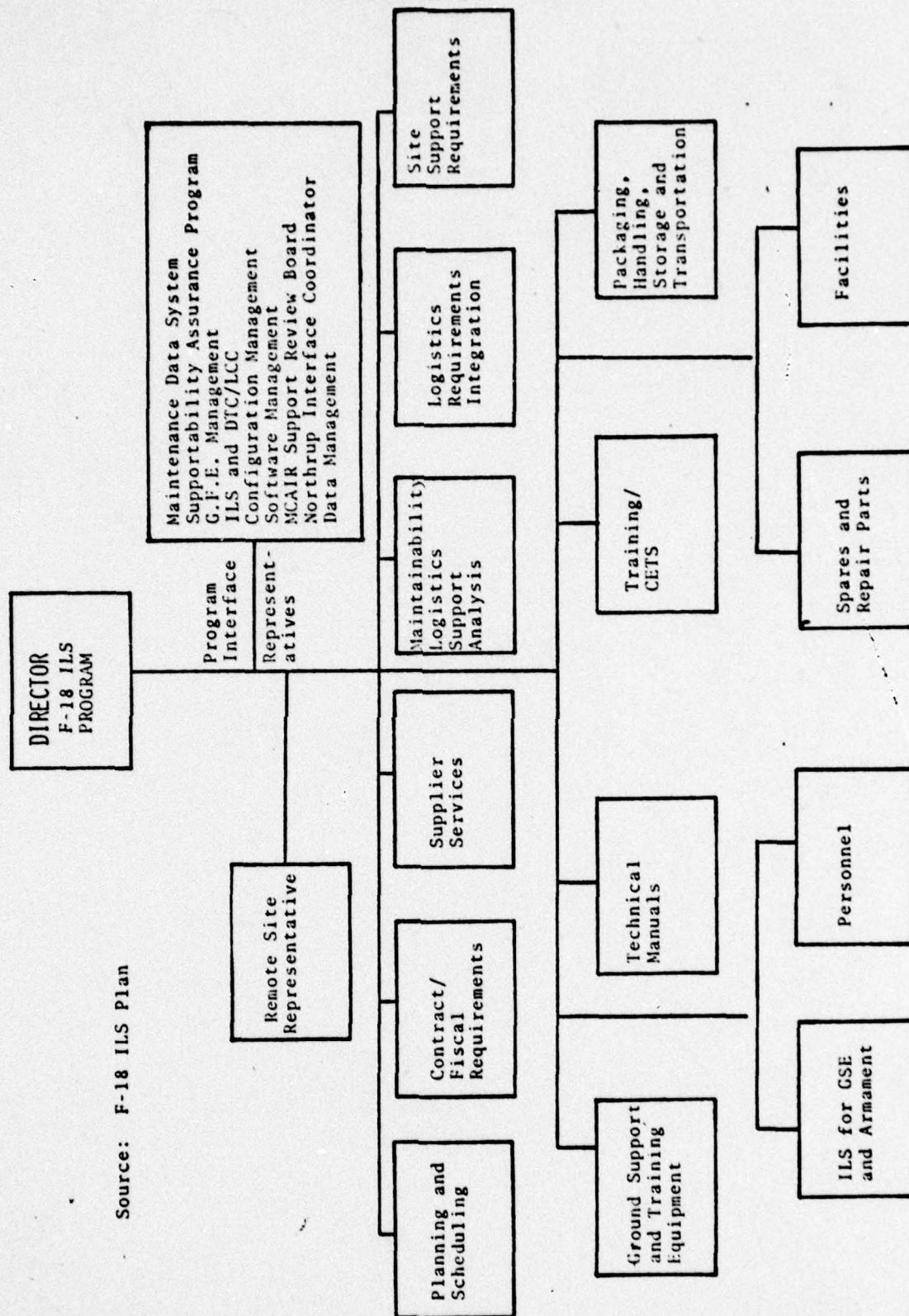
ITEMS IN WEAPON SYSTEM PROVISIONING

| <u>DATE</u> | <u>AIRCRAFT</u> | <u>ITEMS CONSIDERED</u> |
|-------------|-----------------|-------------------------|
| 1947 | F-7F | 17,000 |
| 1957 | A-4 | 48,000 |
| 1962 | P-3A | 200,600 |
| 1966 | A-7A | 193,000 |
| 1971 | P-3C | 254,100 |
| 1976 | F-14A | 279,000 |
| 1976 | S-3A | 256,322 |
| 1976 | AV-8A | 175,774 |

Source: Supply Corps Newsletter, December 1977,
"Provisioning at ASO: A Dynamic Process"
by Robert P. Powelson.

PROVISIONING P
ING-A50-4423/8449

MCAIR INTEGRATED LOGISTICS SUPPORT ORGANIZATION

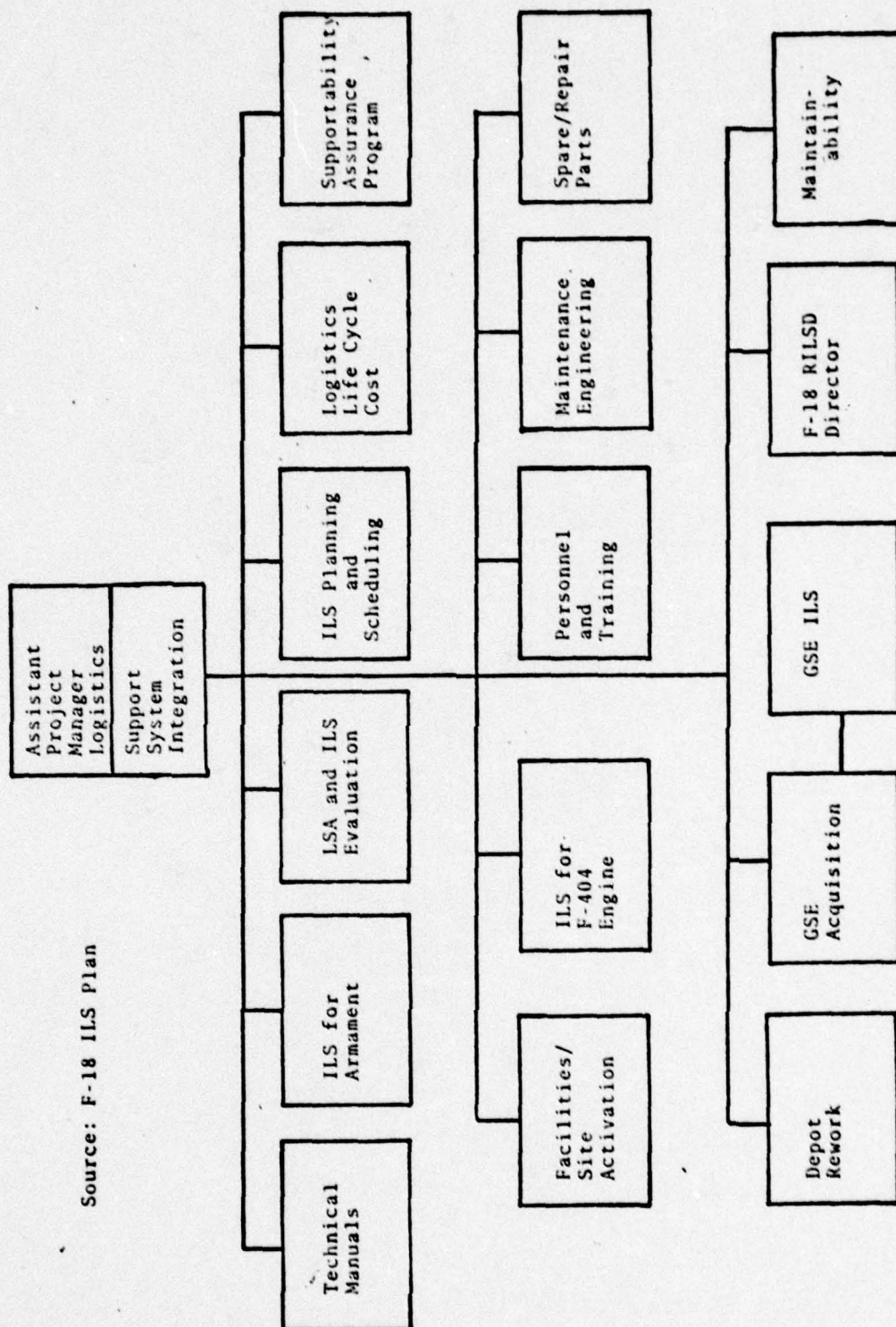


Source: F-18 ILS Plan

APPENDIX C

NAVAIR F-18 INTEGRATED LOGISTICS SUPPORT ORGANIZATION

Source: F-18 ILS Plan



APPENDIX D
F/A-18 PROVISIONING REQUIREMENTS STATEMENT

INTRODUCTION

This F/A-18 Provisioning Requirements Statement (PRS) delineates the contractor's responsibility to provide the initial spares and repair parts, Ground Support Equipment (GSE) and Training Equipment spares for the full production program utilizing the Physical Configuration Audit (PCA) aircraft as the resource development baseline. (This PRS is developed based on the requirements of the ILS Detail Specification, Weapon System Planning Document (WSPD) and Chapters six (6) and seven (7) of the Integrated Logistic Support Plan (ILSP). The PRS includes the selection, cataloging, acquisition, and delivery of support material.) The PRS utilizes the paragraph number references which will correspond to respective paragraphs in MIL-STD-1561 and MIL-STD-1552 Provisioning Specifications. Each paragraph that differs from MIL-STD-1561/MIL-STD-1552 is amplified to define the tasks to be accomplished by the contractor. Where no change exists the paragraphs are the same as reflected in the specifications. Where the paragraphs reflected in MIL-STD-1561/MIL-STD-1552 do not apply, they are shown as "Not Applicable". New paragraphs have been added where necessary to embody the new provisioning concept plan for the F/A-18 program. When disparities exist between this PRS and MIL-STD-1561/MIL-STD-1552, the PRS will be the governing document.

Listed below are general requirements included in implementing this PRS.

- The utilization of the Navy/contractor Weapons System Files for provisioning actions.
- Computation of spares and repair parts quantities utilizing computerized system and U. S. Navy approved formulas/factors and modeling techniques incorporating predicted and achieved supply demand growth in the computation.

- Support material management by the contractor until the desired design stability, equipment maturity and Navy maintenance capability is attained in accordance with site Specific Phased Support Plans.
- Transitioning of technical data and material management responsibilities to the U. S. Navy.
- Computation of long lead items and associated funding to insure best mix of hardware acquisition by system.
- The funding and procurement of spare parts concurrently with the procurement of like production equipment. (SAIP)
- This PRS is predicated upon an initial Material Support Date (MSD) of January 1983 and a tentative MSD completion of September 1983 as dictated by the phased support plan.

1. Scope

1.1 This PRS prescribes the requirements governing the selection, cataloging, acquisition and delivery of F/A-18 weapons system spares/repair parts procured by the Navy from McDonnell Aircraft Company and all appropriate subcontracted items incorporated within end items of his manufacture.

2. Reference Documents

2.1 The issue of the following documents in effect on the date of solicitation form a part of this standard to the extent specified herein.

Specifications

MIL-D-1000, Drawing, Engineering and Associated Lists

SSDS A/O D52 (System Stock Requirements for ASO Provisioning)
dated 31 Mar 1976

SSDS A/O D53 (Initial Outfitting Requirements for ASO Provisioning) dated 28 Feb 1973

SSDS A/O D54 (System Stock Requirements Cost Computations)
dated 17 Mar 1976

Standards

Fed. Std. No. 5, Standard Guides for Preparation of Proposed
Item Logistics Data Records

MIL-STD-100, Engineering Drawing Practices

MIL-STD-1552, Provisioning Technical Documentation, Uniform
DOD Requirements for (As modified herein)

MIL-STD-1561, Provisioning Procedures, Uniform DOD Requirements
for (As modified herein)

Publications

DOD 4100.38-M, Provisioning and other Pre-procurement Screening.

DOD 4100.39-M, Defense Integrated Data System (DIDS) Procedures
Manual.

Weapon System Planning Document (WSPD)

DOD 4140.26-M, Defense Integrated Material Management Manual

3. Definitions. For the purpose of this PRS, the following definitions shall apply.

3.0 Alternate Part. A part that is identified on the engineering drawing and is available from an additional source, but performs the same function as, and can be used interchangeably without modification with the True Manufacturer's Part Number.

3.1 Assembly. A number of parts or subassemblies or any combination thereof joined together to perform a specific function and capable of disassembly. Examples: Power shovel - front, fan assembly, audio frequency amplifier, pump-rotating element.

NOTE: The distinction between an assembly and a subassembly is determined by the individual application. An assembly in one instance may be a subassembly in another where it forms a portion of an assembly.

3.2 Attaching Part. An item used to attach assemblies or parts to the equipment or to each other.

3.3 Commercial Part or Item. A part or item which is manufactured primarily for the commercial rather than the military market and having both commercial and military applications. Commercial parts also include parts which are manufactured in accordance with normal commercial quality controlled production runs which meet or exceed the requirements of Government Specifications or Standards. The item is available in the commercial market.

3.4 Component. An assembly or any combination of parts, subassemblies and assemblies mounted together normally capable of independent operation in a variety of situations.

3.5 Concurrent Delivery. The delivery of support items concurrently with the end item being provisioned.

3.6 Contractor. The supplier of the end item and associated support items to the Government under the terms of a specific contract.

3.7 Days. Shall mean calendar days.

3.8 Design Change. A Government approved engineering change incorporated into the end item which modifies, adds to, deletes, or supersedes parts in the end item.

3.9 Drawings. Graphic data, including drawings as defined in MIL-STD-100 and prepared in accordance with MIL-D-1000, aperture cards in accordance with MIL-C-9877, graphs, or diagrams, industry standards and industry specifications, on which details are represented with sufficient information to define completely, directly or by reference, the end result in the selection, procurement, and manufacture of the item required.

3.10 End Item. A final combination of end products, component parts, or materials which are ready for their intended use; e.g., aircraft, receiver, recorder, or ground support equipment.

3.11 Federal Item Identification. An item description prepared in accordance with DOD-4100-39M.

3.12 Interim Release. Authorization given a contractor to release support items to production or procurement simultaneously with his production requirements for like items prior to submission of a Provisioned Items Order.

3.13 Long Leadtime Items. Those items which because of their complexity of design, complicated manufacturing processes, or limited production, may cause production or procurement cycles which would preclude timely or adequate delivery, if not ordered in advance of normal provisioning.

3.14 Management Coding. The assignment of codes consisting of letters and/or numerals to support items to record management decisions, such as sources for resupply, prescribed levels of maintenance, item managers, and other management data.

3.15 Part. One piece, or two or more pieces, joined together which are not normally subject to disassembly without destruction or impairment of designed use.

3.16 Provisioning Activity. That organization of a using Military Service, or that organization delegated by a using Service, which is responsible for the selection of, and the determination of requirements for, provisioned items. (i.e., Provisioning Requirements). For the purpose of this PRS the provisioning process will be performed by MCAIR.

3.17 Provisioning Performance Schedule (PPS). Check list of events including schedules in the provisioning process that is used to monitor such events.

3.18 Provisioning Technical Documentation (PTD). Provisioning Technical Documentation as used in this PRS, is the generic term used to reference Federal Item Identifications, Interim Support Items List, Mechanized (PCM) or Automatic Data Processing (ADP) tapes. Supplementary Provisioning Technical Documentation (SPTD) is also considered to be a part of PTD. PTD is used by MCAIR for the identification, selection, and determination of initial requirements and cataloging of support items to be procured through the spares selection process.

3.19 Repair Parts. Those support items that are coded to be not repairable; i.e., consumable items.

3.20 Spares. Those support items that are coded to be repairable; i.e., repairable items.

3.20.1 Spare Acquisition Integrated with Production (SAIP). A program wherein spares/repair parts are identified and quantified in time to permit funding and procurement action concurrently with the placement of the end item production order thereby taking advantage of reduced costs and improved support material deliveries.

3.21 Special Tools, Test Equipment, and Support Equipment. Those support items that have single/peculiar application to a specific end item.

3.22 Statement of Prior Submission. Not Applicable

3.22.1 Substitute Part. A part which possesses such functional and physical characteristics as to be capable of being exchanged for another only under specified conditions or for a particular application and without alteration of the items themselves.

3.23 Supplementary Provisioning Technical Documentation (SPTD).

Supplemental Provisioning Technical Documentation is technical data used to describe parts/equipment and consists of data such as specifications, standards, drawings, photographs, sketches and descriptions, and the necessary assembly and general arrangement drawings, schematic drawings, schematic diagrams, wiring and cable diagrams, etc., needed to indicate the location and function of the item. SPTD may include any or all of the following data:

(1) Government or industry specifications or standards; (2) Engineering drawings at least equal to MIL-D-1000, Category D, Form 3; (3) commercial catalogs or catalog descriptions; (4) sketches or photographs with brief description of dimensional, material, mechanical, electrical, and other descriptive characteristics; (5) copies of vendor letters of refusal (when applicable). SPTD shall also include appropriate assembly and general arrangement drawings, schematic wiring and cabling diagrams, etc., necessary to indicate the location and function of the items in the end item. As a minimum, SPTD must be capable of providing for the (1) technical identification of items for maintenance support considerations, (2) preparation of item identification for the purpose of assigning National Stock Numbers, (3) review for item entry control, (4) standardization, (5) review for potential interchangeability and substitutability, (6) item management coding, (7) preparation of allowance/issue lists, and (8) initial procurement from the contractor or original manufacturer.

3.24 Support Equipment. Those support items that are not an integral part of an end item but are required in the operation of the end item.

3.25 Support Items. Items subordinate to, or associated with, an end item (i.e., spares, repair parts, tools, test equipment and sundry materials) and required to operate, service, repair or overhaul an end item.

3.26 Tools and Test Equipment. Those support items that are not an integral part of an end item but are required to inspect, test, calibrate, service, repair, or overhaul an end item.

3.27 Vendor Item. An item which is used in or attached to the end item produced by the contractor under this contract, and which is procured by the contractor on the open market or from established sources and for which the contractor is not the design activity.

4. General Requirements.

4.1 Provisioning Requirements Statement (PRS). This PRS in conjunction with the applicable DD Form 1423 entries and Provisioning Performance Schedule (PPS) will establish schedules, identify actions and delineate the specific procedural and deliverable data requirements applicable to this contract and will be incorporated into this contract by modification thereto.

4.2 Provisioning Performance Schedule (PPS). Significant events and milestones will be stated in PPS (Fig 1).

4.3 Documentation and Data. PTD and SPTD delivered by the contractor in accordance with the requirements of this standard, shall not be considered as satisfying any other contractual requirements. In the preparation of this documentation, the contractor shall, where possible, utilize data being developed for other Government requirements, reliability and maintenance analysis, etc. However, the preparation and submission of provisioning documentation shall not be delayed pending the development of this other data.

4.4 Vendors/Subcontractors. When the contractor procures the end item or a portion thereof from a vendor/subcontractor, the contractor shall impose upon his vendors/subcontractors, not later than the time purchase orders are issued, the applicable requirements, procedures, terms, conditions, and data to satisfy the requirements of this document. The inclusion of the requirement for such data on contractor's purchase orders to his vendors/subcontractors does not relieve the contractor of his obligation to insure delivery of the required PTD and SPTD.

4.4.1 Letters of Refusal. The contractor will obtain from his vendors/subcontractors confirmation in writing whether or not they will

4.4.1 Cont'd - comply with the data requirements levied on them. All letters of refusal (from vendors/subcontractors) must clearly state these refusals and prescribe alternate methods of furnishing adequate data to enable the provisioning process to be accomplished. The vendor/sub-contractor may provide the data required by this standard directly to the Government.

4.5 Contractor Recommendation. The contractor, in making recommendations for both range and quantity of spare/repair parts, shall insure compatibility with the program data, i.e., approved operational maintenance plans for the end item and Weapon System Planning Document (WSPD).

4.5.1 Computation of Spare/Repair Parts Quantities. The contractor shall, during the full production support phase, compute quantities utilizing ASO UICP (Uniform Inventory Control Point) J14 optimization model, D52, D53 and D54. A derate procedure will be developed by the contractor and approved by the Navy to derate each applicable system for initial spares computation to match the expected degree of maturity.

5. Detailed Requirements.

5.1 Conferences. As noted below.

5.1.1 Guidance Conference. The purpose of this conference is to insure that the contractor and the government have a firm understanding of the contractual provisioning requirements, establish funding and task milestones, and formulate firm commitments for optional requirements in accordance with applicable data requirements. When no requirement for a guidance conference is specified in the PRS and the contractor desires a conference, the contractor shall propose a date and place. The proposal shall be submitted within thirty (30) days after contract award or receipt of the PRS. The specific date and place for the guidance conference will be determined by the contractor and the government. The guidance provided to the contractor by the government representatives may include, but shall not be limited to requirements for, the following:

- 5.1.1.1 Contractor's inquiries relative to contractual provisioning requirements.
- 5.1.1.2 Operational and maintenance concepts, i.e., program data.
- 5.1.1.3 Requirements determination methodology.
- 5.1.1.4 Provisioning Technical Documentation.
- 5.1.1.5 Support item requirements.
- 5.1.1.6 Design Changes.
- 5.1.1.7 Sample article requirement.
- 5.1.1.8 Provisioning screening requirements.
- 5.1.1.9 Item identification data.
- 5.1.1.10 Provisioning techniques.
- 5.1.1.11 Provisioned Item Order procedures.
- 5.1.1.12 Support item delivery schedules.

- 5.1.1.13 Support item shipping instructions.
- 5.1.1.14 Interim release.
- 5.1.1.15 Preservation, packaging, packing, and marking.
- 5.1.1.16 Phased provisioning.
- 5.1.2 Provisioning Preparedness Review Conference. Not Applicable
- 5.1.3 Long Lead Time Items Provisioning Conference. Not Applicable
- 5.1.4 Provisioning Conference. Not Applicable
- 5.1.5 Interim Support Items Conference. Not Applicable
- 5.1.6 General Conferences. A conference may be held at any time during the life of the contract for the purpose of resolving provisioning support problems or periodic reviews to establish confidence in the contractor's development of support resources.
- 5.2 Provisioning Method. The following provisioning method will be employed on the F-18 Contract:
 - 5.2.1 Resident Provisioning Team (RPT)/Resident Integrated Logistics Support Detachment (RILSD). Not Applicable
 - 5.2.2 Conference Team Method. Not Applicable
 - 5.2.3 In House Method. Not Applicable
 - 5.2.4 Navy/Contractor Developed Spares Selection Method. The Navy/Contractor will establish a weapon system file which when complete will include all provisioning data elements required to accomplish the objectives of MIL-STD-1561/MIL-STD-1552 for CFE items (spare and non-spare) used on the F/A-18 aircraft, GSE and training equipment. This file maintained by the contractor will be a Navy/Contractor file and will include Navy/Contractor common data as well as any Navy data requirements subsequently negotiated. The contractor may, when contractually authorized by the Navy, utilize the file for certain provisioning efforts associated with Government furnished equipment. This

5.2.4 Cont'd - effort will be contingent upon the Navy providing the necessary elements and data. The file will be periodically reviewed by the Navy representative(s) to establish confidence level in the contractor's assignment of source codes and provisioning factors in accordance with Navy approved maintenance plan packages and to insure that known and anticipated requirements are satisfied. The file will be used to store data for reference and to provide reports and status for both the Navy and the contractor. The contractor will provide the programming effort necessary to establish and maintain the file and to accomplish reports selection. The contractor will conduct provisioning of spares/repair parts for full production effort from this file. Raw and soft consumable material will be provisioned in the same manner as spares/repair parts. After spares selection is completed for a system, section of the aircraft, GSE, training equipment or WRA/SRA, the contractor will compute spares/repair parts quantity requirements in accordance with Paragraph 4.5.1. For those applicable commodity classes Supply Support Requests (SSR's) will be submitted and processed in accordance with Paragraph 5.7.1.1. For those items requiring procurement action by the contractor Provisioning Item Orders (PIO's) will be submitted and processed in accordance with Paragraph 5.7.1. Visibility and management of provisioned orders including delivery status will be available from the contractor's file.

5.3 Provisioning Technical Documentation. Each item of PTD will be ordered as a separate line item on the DD Form 1423 and will cite the appropriate DD Form 1664 or as specified in this PRS. Specific data elements to be included in each list shall be as specified by the Provisioning Technical Documentation Data Selection Sheet (PTDDSS), DD Form 1949-1. Specific items of PTD will be as follows:

- 5.3.1 Provisioning Parts List (PPL). Not Applicable
- 5.3.2 Short Form Provisioning Parts List (SFPPL). Not Applicable
- 5.3.3 Common and Bulk Items List (CBIL). Not Applicable
- 5.3.3.1 Option 1. Not Applicable
- 5.3.3.2 Option 2. Not Applicable
- 5.3.4 Long Lead Time Items List (LLIL). Not Applicable
- 5.3.5 Repairable Items List (RIL). Not Applicable
- 5.3.6 Numerical Listing/Index. Not Applicable
- 5.3.7 Other Provisioning List.
- 5.3.7.1 Post Conference Provisioning Lists. (DI-V-2172) The contractor shall prepare and submit magnetic tapes in accordance with DI-V-2172 incrementally in accordance with the phased support plans.
- 5.3.7.2 Provisioned Item Order. Upon completion of spares selection the contractor shall prepare and submit PIOs in accordance with Paragraph 5.7.1. The format will be as reflected in Attachment 1.
- 5.3.7.3 Delinquency Delivery Report. The contractor shall prepare and submit a Delinquency Delivery Report in accordance with Paragraph 5.8.2.1.3. The format of this report will be as reflected in Attachment 2.
- 5.3.8 Supplementary Provisioning Technical Documentation. A complete set of SPTD will not be provided. However, the contractor shall establish a complete drawing file, including commercial catalogs or catalog pages, or Item Identifications used during the spares selection process. Hard copy SPTD for "P" source coded non NSN items will be submitted with the PCPL where necessary to complete the item identification process.
- 5.3.8.1 Individual SPTD hard copy, microfilm or aperture cards, in part number sequence shall be made available to the Navy representative located at the contractor facility on an as required basis.

5.3.8.2 SPTD shall not be provided when the item is identified as a Government Specification or standard which completely describes the item including its dimensional, mechanical and electrical characteristics.

5.3.9 Item Identification. The contractor shall prepare Federal Item Identification in accordance with Chapter 2 of DOD 4100.39-M, "Processing of Item Logistic Data" for all new, non-stock listed spare items introduced on the F-18/A-18. ASO (Code DA-A) will provide the contractor sufficient orientation to insure Item Identifications are prepared to satisfy Navy requirements. Item identifications will be processed and forwarded to the ASO (Code DAI-A) within 60 days after spares selection is completed subsequent to receipt of the approved PIO by the contractor.

5.3.10 Manufacturer's or Commercial Manual. When commercial hardware is utilized for production use, vendor commercial publications/drawings will be used for spares selection. In the event no drawings are available and the item is procurable, non-stock listed, the contractor shall prepare an Item Identification in descending sequence (i.e., Complete Descriptive, Partial Descriptive, Reference Method in accordance with Paragraph 5.3.9. New manuals or drawings will not be developed specifically to satisfy provisioning and/or cataloging requirement.

5.3.11 Statement of Prior Submission (SPS). Not Applicable

5.3.11.1 Not Applicable

5.3.11.2 Not Applicable

5.3.12 Incremental Submissions. When authorized by the PRS, the provisioning technical documentation may be submitted in increments, provided that such increments comprise no less than the requirements of a complete component. The complete PTD will be submitted within the time specified by the DD Form 1423 when this option is exercised. Unless otherwise specified by the PRS, PTD submission shall not be withheld pending completion of PTD for another component.

5.3.13 Design Change Notice (DCN). Upon ECP approval and as engineering drawings, or engineering orders (EO's) are released, the contractor's weapons system file will be progressively updated to reflect the approved configuration changes. A Provisioned Item Order (PIO/Supply Support Request (SSR) will be submitted within 21 days after release for fabrication or procurement, for prime contractor design items and 42 days for vendor supplied items. After file transition the contractor will continue to submit updated file interface tapes reflecting design change data in accordance with the PRS.

5.3.13.1 Procurable Type Items. Procurable type items will be processed as follows:

5.3.13.1.1 Items Procured from the Contractor. Concurrent with incorporation of a change in production, the contractor will prorate items on order to the new configuration in a direct ratio consistent with the aircraft, GSE or training end item. The contractor's vendors shall utilize this same proration technique to insure incorporation of the change at the earliest possible time and/or concurrent with the production line effectivities. The contractor will prepare and submit a PIO with these changes in accordance with Paragraph 5.7.1.

5.3.13.1.2 Procurable Type Items not Procured from the Contractor. The contractor will prepare and submit timely Supply Support Requests (SSR's) for the appropriate Federal supply classes. Spare/repair parts which are stock listed will be MILSTRIP requisitioned by the contractor. If the item is not available from government sources, the contractor will initiate procurement action via the PIO in accordance with Paragraph 5.7.1.

5.3.13.2 Non-Procurable Type Items. The contractor shall input design change data into the data file for non-procurable type items on a quarterly basis.

- 5.4 Direct Vendor Contact. Not Applicable
- 5.5 Phased Provisioning. When phased provisioning is a requirement of the contract, the contractor shall comply with the provisions of MIL-STD-1517. The charges for the contractor's compliance shall be set forth as a separate line item on the contract.
- 5.6 Provisioning Screening. Provisioning Screening shall be accomplished for first appearance items only on all lists, excluding PCPL and PPLI, indicated on DD Form 1949-1, in accordance with procedures set forth in DOD 4100.38M (latest issuance) by using either the 80 column Punched Card Accounting Machine (PCAM) card, or magnetic tape format. The input data shall be in Segment II Fixed Length Record Format with the following specific requirements:

| <u>Title</u> | <u>Data</u> | <u>Card Columns</u> |
|--|-------------|---------------------|
| <u>Document Identifier Code (DIC)</u> | LSR | 1-3 |
| <u>Package Sequence Number (PSN)</u> | | 4-6 |
| PSN is limited to 25 reference numbers per submitter's control number. First position shall be alphabetic A on all cards except last card which will be Z. Last two positions shall be numeric. Single card submitters shall be "Z01". | | |
| <u>Priority Indicator Code</u> | 4 | 7 |
| <u>Activity Code, Screening</u> | KE | 8-9 |
| <u>Submitter's Control Number (SCN)</u> | | 10-26 |

The SCN shall be constructed as follows:

CC

- 10-14 Data will be provided by the Provisioning Activity.
- The current calendar year will be entered in the first position (CC 10) the second through the fourth

positions shall represent a specifically assigned control number (CC 11-13). If the control number is segmented, the segment code shall be entered in the fifth position (CC 14). Control number segments will be assigned letters A thru Z inclusive (except I and O) and the numbers 1 thru 9 inclusive. If control number segments are not applicable, the last position CC 14 shall be left blank. Control numbers shall be assigned by and obtained from ASO (Code DAS2) - Telephone number (215) 697-2128/2129.

15-20

Shall be blank.

21-26

Shall contain the Provisioning List Item Sequence Number (PLISN) which is developed by the contractor in accordance with MIL-STD-1552, paragraph 5.1.5.1. The first four positions shall be right justified. These numbers will always contain an alphabetic character in the first position. A PLISN must be assigned for each line item. However, when multiple appearances of the same part number occur, the PLISN of the first appearance shall be assigned for provisioning screening purposes. Multiple part numbers which represent the same line item shall be identified by the same PLISN; i.e., specification, source control part numbers.

Destination Code

27-31

Destination codes will be assigned by the Provisioning Activity for each specific contractor. If the contractor has previously been assigned a destination code by the Provisioning Activity, re-registration will not be required. Destination codes shall be assigned by and obtained from ASO (Code DAS3), Telephone number (215) 697-3170/3501.

Screening required for provisioning will contain the contractors destination code. For design changes the first number of the destination code will be changed to the letter "D". For Foreign Military Sales provisioning screening the first number of the destination code will be converted to the letter "F".

| | | |
|--|-------|-------|
| <u>Type of Screening Code (Input)</u> | F | 32 |
| <u>Output Data Request Code (ODRC)</u> | 9910 | 33-36 |
| <u>Statistical/Indicator Code</u> | A | 37 |
| <u>Single/Multiple Output and Futures</u> | | |
| <u>Data Option Code</u> | 2 | 38 |
| <u>Reference Number Code</u> | 3 | 39 |
| <u>Segment Code Screening</u> | 2 | 40 |
| <u>Reference Number Category Code (RNCC)</u> | Blank | 41 |
| <u>Reference Number Variation Code (RNVC)</u> | Blank | 42 |
| <u>Federal Supply Code for Manufacturers (FSCM)/</u> | | |
| <u>NATO Supply Code for Manufacturers (NSCM)</u> | | 43-47 |
| <u>Reference Number</u> | | 48-79 |

Each submittal made by mail will be accompanied by a letter of transmittal.

Exclusions from provisioning screening are listed in paragraph 1.110.7 of DOD 4100.38-M.

Instructions for modifications of reference numbers are provided in Chapter IV of DOD 4100.38-M.

Pre-provisioning Screening results will be submitted to DLSC. The contractor will receive the DLSC screening results and load to Weapons System File. For ASO cog items the contractor will interrogate the ASO data files through the ASO UICP remote terminal and extract the following peculiar data elements: Replacement Factors, ACN/ISN's, SMIC, Cog Codes and MCC Codes. Screening results will be returned to the contractor within 10 days after submittal. The contractor shall enter this data on the provisioning format as indicated in paragraphs 5.1.5.13 and 5.1.5.16 of MIL-STD-1552.

Screening results for design changes will be returned directly to the submitting contractor from DLSC and shall be provided to the PA with the DCN PTD. DID DI-V-7016 applies.

5.6.1 Substitute Parts. When the Government identifies and/or recommends a substitute item for use in place of logical spare and repair parts included in the "as-built" configuration the contractor, when contractually authorized, shall perform an engineering evaluation and either agree that the item is a logical substitute or provide specific reasons why such proposed substitute item cannot be used. All proposed substitute items accepted by the contractor shall be integrated into the contractor's data files. When technical manuals are procured from the contractor the accepted substitute item(s) will be reflected as the item(s) of supply in numerical index of appropriate manual. Items rejected will not be used in support of the F/A-18 and NSNs will be assigned to the prime items.

5.7 Order of Support Items.

5.7.1 Provisioned Item Order (PIO). The contractor will submit PIO's for items selected in accordance with Paragraphs 5.2.4 and 5.3.7.2. The PIO will be submitted to the Navy for approval and subsequent ACO order processing. The contractor will continually evaluate usage data, minimum stock levels and item deliveries, etc., and submit PIO's/SSR's for those items for which additional spares are required to ensure continued support. PIO's will be initiated in time to release spares for

5.7.1 Cont'd - fabrication or procurement to take advantage of savings resulting from Spares Acquisition Integrated with Production (SAIP) and to ensure delivery consistent with program requirements. If concurrent delivery is required and such delivery necessitates a delay in delivery of the end items or components, an adjustment in the delivery requirements will be considered. The PIO will be approved, processed and funded to the contractor within thirty (30) days of receipt. The Navy reserves the right to place additional orders for support items for the life of the contract.

5.7.1.1 Supply Support Request (SSR). Supply Support Request will be submitted in accordance with DOD 4140.26M or as modified by the Navy. MILSTRIP requisitions will be submitted by the contractor. If the part is not readily available from the DOD agency, the contractor will initiate a PIO and process in accordance with Paragraph 5.7.1.

5.7.2 Priced Provisioned Item Order (PPIO). Within ninety (90) days after approval of the PIO, the contractor will submit to the Administrative Contracting Officer (ACO) a PPIO which will include proposed unit prices and extended unit prices.

5.7.3 Negotiation of Prices. After receipt of the PPIO, the contractor and contracting officer will promptly proceed to negotiate prices for the items on the PPIO in accordance with ASPR 4-303.3. Failure to agree upon the price for any one item shall not delay the establishment of the remainder of the PPIO items as priced exhibit by supplemental agreement.

5.7.4 Revision to Provisioned Item Order. When a design change affects any parts on order, the contractor will take immediate action to submit a revised PIO to the Navy representative located at the contractor's facility for approval and the ACO for order processing.

5.7.4.1 Deletions. When a design change reduces or eliminates support item requirements for the end item, the contractor shall delete or reduce such requirements originally ordered by a PIO in the ratio authorized by the program data applicable to the end items on order that are affected by the design change.

5.7.4.2 Adjustments. When a support item previously ordered by the Government is replaced by another item, the contractor shall fabricate or procure the new item in the same ratio as the number of end items affected by the change within the previously authorized funding limitations. When the adjustment requires an increase in the total quantity recommended or any additional items of support, the increases will be recommended by the contractor in accordance with program data provided by the procuring activity as referenced in Paragraph 4.5.

5.7.5 Interim Release.

5.7.5.1 Not Applicable

5.7.5.2 Not Applicable

5.7.6 National Stock Number (NSN). When a PIO is issued under the end item contract, it will include all available NSN's for support items ordered. Support items will not be released for shipment unless identified with a NSN provided under the end item contract (or other Navy approved source) or unless the contracting officer authorizes shipment less NSN or under a part number. The contractor shall request emergency stock numbers from the ASO Code DAT3-A 30 days prior to schedule shipment date. Should the Government not assign an NSN by the

5.7.6 Cont'd - scheduled shipment date of the item, the contractor is authorized to drop ship the item for billing purposes.

5.8 Delivery of Support Items. The delivery of support items identified on the PIO shall be as specified on the PRS as follows:

5.8.1 Concurrent Delivery. Not Applicable

5.8.2 Scheduled Delivery.

5.8.2.1 When the Government provides a required delivery schedule with each PIO, the contractor shall accept the order and within sixty (60) days notify the Government of his acceptance of the schedule or provide a proposed line item delivery schedule for negotiation. The approved schedule will be incorporated into the contract by supplemental agreement.

5.8.2.2 The contractor will incorporate a proposed line item delivery schedule in the PIO. The contractor will develop delivery schedules based on forecasted or experienced demands, site activation dates, Navy repair capability and initial support requirements. Those items required for initial support will be scheduled sixty (60) days prior to the delivery of the first end item. Approval of the PIO will constitute approval of the proposed delivery schedule. If the Navy takes exception to the proposed delivery, the Navy will annotate the changes on the PIO. The contractor will process changed delivery schedules in accordance with Paragraph 5.8.2.2.1.

5.8.2.2.1 In the event the Navy initiates a PIO, in accordance with Paragraph 5.7.1.2, the Navy will provide a required delivery schedule with each PIO. The contractor shall accept the order and within sixty days notify the Navy of those items for which the required delivery schedule cannot be met, and provide an alternate delivery schedule. If the alternate delivery schedule is unacceptable, the Navy and the contractor will promptly proceed to negotiate a mutually acceptable delivery schedule. When

5.8.2.2.1 Cont'd - the contractor can meet the required delivery schedule reflected in the PIO it is not necessary to notify the Navy.

5.8.2.2.2 Delivery of Alternate Parts. The contractor may ship alternate parts in lieu of prime part numbers if both items are identified on the engineering drawing and assigned the same National Stock Number (NSN). In the event an alternate part is non-stock listed, other than non-consumable items, the contractor will initiate necessary cataloging action to update the Navy/Contractor file via "Add Ref" transaction and will proceed with shipment of the part.

5.8.2.2.3 Delivery Delinquency Report. The contractor shall prepare and submit a monthly delivery delinquency report in accordance with Attachment 2. This delinquency report will be submitted when spare parts and/or GSE are delinquent based on the approved or contractual delivery dates. The delinquency report will be submitted on the 10th of the month, 30 days subsequent to the scheduled delivery dates.

5.8.2.2.4 PIO and Funds Status Reports. The contractor shall prepare and submit an Estimated Funds Summary Report and a PIO Status Report quarterly or as requested by the Navy. The format of the PIO Status Report will be as reflected in Attachment 3. The Funds Summary Report will provide an estimate of the funds expended for the items included in the PIO Status Report.

5.9 Cancellation Charges. Cancellation charges arising from reduction or cancellation of support items that have been previously placed on a PIO shall be included in the cancellation addendum or other appropriate lists. Charges in respect to claims arising from cancellation costs shall be processed and settled as an equitable adjustment under the "changes"

5.9 Cont'd - clause of the contract or as a termination under the "termination" clause of the contract. The contractor shall make every effort to minimize such charges by using those items reduced or cancelled by diversion to production or other uses.

5.10 Quality Assurance Provisions for PTD and SPTD. A magnetic test tape of the PCPL (approximately 100-150 items or the first completed repairable assembly) prepared in Figure I and II format of DID DI-V-2172 (Paragraph 10.3), containing the data on cards A thru Q of the Provisioning Performance Schedule. ASO will advise the contractor of the acceptance or rejection of the tape.

5.10.1 Certification. The contractor shall certify the PCPL against the end item configuration to assure that each support item identified in the PCPL is accurately depicted at the time of submission. Subsequent engineering changes in design shall be processed utilizing the DCN procedures.

5.10.2 Conformance with Technical Manuals. When technical manuals are procured from the contractor, the contractor shall assure that support items appearing in technical manuals are identical to the items appearing in the contractor's Weapons System File.

5.10.3 Coordination of Changes. The contractor shall establish positive internal communications between his engineering and logistic personnel to assure that the latest technical and hardware configuration data are used in loading the contractor's Weapons System File and that changes are made in accordance with Engineering changes.

5.10.4 Legibility and Reproducibility. Not Applicable

5.10.5 Acceptance of PCPL. Thirty (30) days from date of receipt of each item of PCPL the provisioning activity through the contracting officer will notify the contractor of acceptability or inadequacy. If

5.10.5 Cont'd - inadequate, (contains deficiencies, omissions, or errors), the provisioning activity using examples and sampling techniques, will identify those areas or inadequacy for remedial action. Notification of acceptability or inadequacy of incremental submissions will be furnished to the contractor within thirty days from receipt of each increment.

5.10.6 Packing. Provisioning products will be packed to assure arrival at destination in satisfactory condition. Containers and wrappings will conform with the best commercial practices.

5.10.7 Marking. Containers and packages used for mailing/shipping provisioning products will be legibly marked with the following information in addition to the address:

Provisioning Technical Data:

Equipment Name _____

Contract Number _____

Contract Line Item Number _____

Contractor _____

Model/Type/NSN _____

PCC _____

PROVISIONING PERFORMANCE SCHEDULE

END ITEM F-18/A-18

CONTRACTOR - MCDONNELL DOUGLAS

END ITEM DELIVERY DATE - _____

CONTRACT: N00019-75-C-0424

| EVENT | MIL-STD-1561 REFERENCE | START | COMPLETE |
|---|---------------------------|-----------|----------|
| CONTRACT AWARD | | 22 JAN 76 | TBD |
| GUIDANCE CONFERENCES | 5.1.1 | APR 78 | AS REQ'D |
| DEVELOP/SUBMIT PROVISIONING REQUIREMENTS STATEMENT | 4.1 | SEP 78 | SEP 78 |
| MCAIR SUBMIT COST QUOTE | DD FORM 1949-1 | OCT 78 | OCT 78 |
| NAVAIR FUND PRS | | NOV 78 | |
| ITEM SELECTION INDOCTRINATION | 5.1 | DEC 78 | |
| MCAIR DUAL REGISTRATION WITH DLSC | 5.6 | APR 80 | APR 80 |
| CONTRACTOR/DLSC SCREENING (INCREMENTAL) | 5.6 | JUN 80 | AS REQ'D |
| ASO REFINED DLSC OUTPUT (INCREMENTAL) | 5.6 | JUN 80 | AS REQ'd |
| PREPARATION OF PTD | 5.3 | NOV 79 | AS REQ'D |
| PREPAREDNESS REVIEW CONFERENCE (GENERAL CONFERENCE) | 5.1.6 | NOV 78 | AS REQ'D |
| ITEM SELECTION PROCESSING (CONTRACTOR) | 5.2.4. | NOV 79 | AS REQ'D |
| CONTRACTOR MONITORING (ASO) | 5.2.4 | JAN 80 | AS REQ'D |
| POST CONFERENCE PROVISIONING LIST INCLUDING ONE AVIONIC AND ONE NON-AVIONIC WRA EACH CONTAINING APPROX- IMATELY 500 ITEMS | 5.3.7.1 | JAN 82 | APR 82 |

FIGURE 1

PROVISIONING PERFORMANCE SCHEDULE

END ITEM F-18/A-18

CONTRACTOR - MCDONNELL DOUGLAS

END ITEM DELIVERY DATE - _____

CONTRACT: N00019-75-C-0424

| EVENT | MIL-STD-1561 REFERENCE | START | COMPLETE |
|--|---------------------------|----------|----------|
| COMPLETED POST CONFERENCE PROVISIONING LIST MAGNETIC TAPE (CARDS A THRU Q PLUS J14 AS REQUIRED) | 5.3.7.1 | JUN 82 | AS REQ'D |
| FEDERAL ITEM IDENTIFICATION CONFERENCE | 5.1 | NOV 81 | NOV 81 |
| SUPPLY SUPPORT REQUEST PROCEDURES CONFERENCE | 5.1 | NOV 81 | NOV 81 |
| POST PROVISIONING PROCEDURES CONFERENCE | 5.3.13 | JAN 81 | AS REQ'D |
| TEST POST PROVISIONING CHANGES | 5.3.13 | JUL 81 | JUL 81 |
| COMMENCE SUBMISSION OF POST PROVISIONING CHANGES | 5.3.13 | JUL 82 | AS REQ'D |
| NAVY RELEASE SPARES ORDERS (COORDINATED SAIP) | 5.7.1 | AS REQ'D | AS REQ'D |
| SUPPLY SUPPORT REQUEST (SSR) | 5.7.1.1 | JUN 82 | AS REQ'D |
| TRANSITIONING PLANNING CONFERENCE | 5.1.6 | JAN 82 | AS REQ'D |
| TRANSITIONING CONFERENCES | 5.1.6 | JUL 82 | AS REQ'D |
| CONTRACTOR SPARES DELIVERIES | 5.8 | NOV 82 | AS REQ'D |
| MSD (PHASED START DATE) | | JAN 83 | SEP 83 |
| MSD (FINAL COMPLETION DATE) | | SEP 83 | SEP 83 |
| CONTRACTOR SUPPORT DATE | | SEP 78 | AS REQ'D |

FIGURE 1 (Cont'd)

F-18

PROVISIONING REQUIREMENT STATEMENT

(ATTACHMENT 1)

PROVISIONED ITEM ORDER

(Continued)

F-18

PROVISIONING REQUIREMENT STATEMENT

(ATTACHMENT 2)

DELINQUENCY DELIVERY REPORT

PREFACE

DELINQUENCY DELIVERY REPORT

DELINQUENCY DELIVERY REPORT

I. PURPOSE:

This report is provided as contractually required, to portray those part numbers which are undelivered (delinquent) to McDonnell Douglas committed delivery schedule.

II. FORMAT:

A. Sequence of data is controlled through use of the National Stock Number (NSN), taking into account customer requirements to manage material by:

1. Federal Supply Class (FSC)
2. Dual Cognizance Code (Cog)
3. A new page is started each time a change occurs in any of these elements.

B. A two (2) line per item presentation is utilized for this report.

C. The following are brief descriptions of the elements of data contained in the report:

ITEM NUMBER -

Sequence number or Exhibit Line Item Number (ELIN) assigned to identify the part number in the Priced Spare Parts List and utilized on the shipping document.

NATIONAL STOCK NUMBER -

Department of Defense assigned number applicable to the part number being reported.

SPECIFICATION CONTROL DRAWING NUMBER

The number assigned to the contractor's specification which sets forth, in drawing form, the design, performance/test inspection and related engineering requirements for an item to be fabricated by another manufacturer.

II. FORMAT: - Cont.

VENDOR CODE -

Federal Supply Code for manufacturers, as listed in the Defense Supply Agency H-4 Series Handbook, identifies the "supplier" of the part number being reported.

QUANTITY ORDER -

Total quantity procured under the contract and contract line item for which this report is prepared.

QUANTITY SHIPPED -

Quantity shipped as of the calendar date of the report.

QUANTITY DELQ. -

Quantity delinquent (undelivered to a past, approved schedule date).

F'CST DATE (FORECAST DATE) -

The month and year in which the contractor estimates the delinquent quantity will be shipped. This date is portrayed as a 3 digit number, the first 2 digits being the month and the last digit being the year, i.e. 056 = May 1976.

REASN CODE (REASON CODE) -

Code assigned by the contractor indicating the reason for delinquency.

REMARKS -

Narrative description of the reason code. Paragraph III contains cross reference of Reason Codes to Narrative descriptions.

NOUN -

Nomenclature identifying the reported part number.

MANUFACTURERS PART NUMBER -

Part number assigned by the manufacturer of the item.

REPORT TITLE -

Delinquency Delivery Report - applicable sub-title.

CONTRACT NUMBER -

Applicable Contract Number for which the items are being reported.

II. FORMAT: - Cont.

LINE ITEM/CALL -

Contract Line Item Number, or in the case of call type contracts, the customer call number assigned to the specific order.

DATE OF REPORT -

Calendar date report was mechanically printed.

PAGE NUMBER -

Page numbers applicable to total report.

III. REASON CODE INFORMATION:

A. The following cross-reference of Reason Codes to Narrative description is provided as an aid in utilizing this report:

REASON CODE

DESCRIPTION

CODE 1 - CUSTOMER ACTION

1A
1B
1C
1D
1E
1F
1G
1H
1J
1K

H/U NAT STOCK NUMBER
H/U SHPG INSTRUCTION
FAD/TEST REQUIRED (First Article Demonstration or Testing Required)
H/U DESIGN APPROVAL
GVT T/O PUB REQUIRED (Tech Order or Publication Required)
PKG APPROVAL RQRD
H/U PROCUREMENT AUTH
H/U CFAE (Held Up Government Furnished Equipment)
CUSTOMER STOP ORDER
PART RETURN REQUIRED

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CODE 2 - ENGINEERING ACTION

2A
2B
2C
2D

ENGINEER STOP ORDER
ENGINEER REDESIGN
PREPRODUCTION TEST
FUNCTIONAL TEST

CODE 3 - VENDOR ACTION

3A
3B

CRITICAL TO PRODUCTN
LATE ORDER RECEIPT

REASON CODE INFORMATION - Cont.

REASON CODE DESCRIPTION

CODE 3 VENDOR ACTION - Cont.

| | |
|----|-----------------------|
| 3C | LABOR/STRIKE PROBLEM |
| 3D | VENDOR DATA REQUIRED |
| 3E | LOW PRODUCTION YIELD |
| 3F | SKD EXCESS/CAPACITY |
| 3G | INSPECTION/TEST FAIL |
| 3H | H/U MATERIAL |
| 3J | DESIGN STOP ORDER |
| 3K | SKD PRIOR TO V/QUOTE |
| 3L | VENDOR NEGOTIATIONS |
| 3M | VEND L/T ADJUSTMENT |
| 3N | INCREMENT SKD DELAY |
| 3P | MFG EQUIP FAILURE |
| 3Q | MINIMUM BUY DELAY |
| 3S | SCHED/ORDER PROBLEM |
| 3T | MANUFACTURING PROBLEM |

CODE 4 MCDONNELL DOUGLAS CORPORATION

| | |
|----|----------------------|
| 4A | CRITICAL TO PRODUCTN |
| 4B | LATE ORDER RECEIPT |
| 4C | LABOR/STRIKE PROBLEM |
| 4D | VENDOR DATA REQUIRED |
| 4E | LOW PRODUCTION YIELD |
| 4F | SKD EXCESS/CAPACITY |
| 4G | INSPECTION/TEST FAIL |
| 4H | H/U MATERIAL |
| 4J | DESIGN STOP ORDER |
| 4K | SKD PRIOR TO V/QUOTE |
| 4L | VENDOR NEGOTIATIONS |
| 4M | VEND L/T ADJUSTMENT |
| 4N | INCREMENT SKD DELAY |
| 4P | MFG EQUIP FAILURE |
| 4Q | MINIMUM BUY DELAY |

REASON CODE INFORMATION - Cont.

REASON CODE DESCRIPTION

CODE 4 MCDONNELL DOUGLAS CORPORATION - Cont.

| | |
|----|--|
| 4R | T/I RQRD AT MCAIR (TRIAL INSTALLATION REQUIRED AT MCAIR) |
| 4S | SCHED/ORDER PROBLEM |
| 4T | MANUFACTURING PROBLEM |

CODE 5 SHIPPING ACTION

| | |
|----|----------------------|
| 5A | PROCESS OF SHIPMENT |
| 5B | DELAYED DESTINATION |
| 5C | PACKAGING DIFFICULTY |
| 5Z | FORECAST TO SCHEDULE |

CODE 6 MISCELLANEOUS

| | |
|----|---|
| 6A | SHPD HIGHER PRIORITY |
| 6C | CANCEL REQUIREMENT |
| 6D | VENDOR T/O PUB RQRD (TECH ORDER OR PUBLICATION REQUIRED) |
| 6E | T/I RQRD AT GVT SITE (TRIAL INSTALLATION REQUIRED AT GOVERNMENT FACILITY) |

DELINQUENCY DELIVERY REPORT

| JOB CALL ITEM NUMBER | NATIONAL STOCK NUMBER | | SPECIFICATION CONTROL DRAWING NUMBER | VENDOR CODE | QUANTITY ORDER | QUANTITY SHIPPED | QUANTITY DELO. | REASON CODE | F'CT DATE | REASON CODE | REMARKS | | |
|----------------------------|-----------------------|----------|---|----------------------|---------------------|----------------------|--------------------|----------------|--------------|----------------|------------------|--------------|----------------|
| | MOON | 1/1 | | | | | | | | | SCHEDULE DATE | SHIP CODE | SPR LINE |
| | INTERFACE DATA | | CUSTOMER REQUISITION NUMBER | DIST | PACKING SHEET NO | SHIPMENT QUANTITY | REASON QUANTITY | | | | SHIPPED DATE | VIA | BILL OF LADING |
| | | | | | | | | | | | | | |
| 3ABA EOML. | 5320 FASTENER | BF 50 | ST3M344A3-13 TL310L3-13 | 85495 0 2029RK | 50 43 | 2 | 46 48 46 | | | 1A | 7708 | 2N | 2 102 |
| 3ABA EOMH. | 5320 FASTENER | BF 50 | ST3M344A3-14 TL310L3-14 | 85495 0 2029RK | 50 47 | 3 | 47 47 47 | | | 1A | 7708 | 2N | 2 102 |
| 3ABA EOMN. | 5320 FASTENER | BF 50 | ST3M344A3-15 TL310L3-15 | 85495 0 2029RK | 50 48 | 2 | 46 46 48 | | | 1A | 7708 | 2N | 2 102 |
| 3ABA EOMP. | 5320 FASTENER | BF 50 | ST3M344A3-16 TL310L3-16 | 85495 0 2029RK | 50 46 | 4 | 46 46 46 | | | 1A | 7708 | 2N | 2 102 |

| JOB CALL ITEM NUMBER | NATIONAL STOCK NUMBER | | SPECIFICATION CONTROL DRAWING NUMBER | | VENDOR CODE | QUANTITY ORDER | QUANTITY SHIPPED | QUANTITY DELO. | REMARKS | BILL OF LADING | | |
|----------------------------|-----------------------|-----|---|----------------------------------|--------------------------|---------------------|----------------------|--------------------|----------------|------------------|--------------|-------------|
| | MOON | 1/1 | MANUFACTURERS PART NUMBER | CUSTOMER REQUISITION NUMBER | | | | | | SCHEDULE DATE | SHIP CODE | SPS LINE |
| | INTERFACE DATA | | | | UNIT COST | PACKING SHEET NO | SHIPMENT QUANTITY | REASON QUANTITY | REASON CODE | SHIPPED DATE | VIA | |
| 18AA A440. | INSULATION, THER | | 12 | PS74-540059-203 AV1183-5 | 76823 56 00421G | 1 1 | 0 0 | 0 1 | 57 | 7808 | 2C | 2 10 |
| 18AA A394. | VALVE, LINEAR | | 13 | PS74-690115-101 AV13J1180 | 76823 495 AFPF18 | 2 1 | 0 0 | 0 1 | 5A | 7807 | 1C | 2 10 |
| A394. | | | | | 00421G | 1 | 0 | 0 | 4K | 7808 | 1C | 2 10 |
| 18AA A476. | VALVE, CK-APU | | 12 | PS74-540057-101 AV18A1128 | 76823 768 00421G | 2 1 | 0 0 | 0 1 | 5Z | 7811 | 2C | 2 10 |
| A476. | | | | | AFPF18 | 1 | 0 | 0 | | 7905 | 28 | 2 10 |
| 18AA C784. | VALVE, CHECK | | 12 | PS74-540057-109 AV18A1143-109 | 76823 0 AFPF18 | 3 1 | 0 0 | 0 0 | | 7905 | 28 | 2 10 |
| C784. | | | | | 00421G | 2 | 0 | 0 | | 7905 | 2N | 2 10 |
| 18AA A049. | PANEL, CONTROL | | 18 | DS74-870091-101 A05A0227-1 | 12464 18750 AFPF18 | 3 1 | 0 0 | 0 0 | | 7811 | 1N | 2 10 |
| A049. | | | | | 00421G | 1 | 0 | 0 | | 7812 | 1N | 2 10 |
| A049. | | | | | AFPF18 | 1 | 0 | 0 | | 7904 | 1C | 2 10 |
| 18AA A028. | PLAINTER, INTERFE | | 17 | DS74-870057-101 A05A0228-1 | 12464 19300 AFPF18 | 3 1 | 0 0 | 0 0 | | 7904 | 1C | 2 10 |
| A03P. | | | | | 00421G | 1 | 0 | 0 | | 7905 | 1C | 2 10 |

REPORT TITLE: SCHEDULE/DELIVERY ANALYSIS - F18 CFE SPS
 DATE: 18 JUN 78
 PAGE: 18 OF 38
 SOURCE: NUMBER 0075

F-18
PROVISIONING REQUIREMENTS STATEMENT
(ATTACHMENT 3)
PIO STATUS REPORT

MIL-STD-1552

1. SCOPE.

1.1 This standard prescribes the format and preparation instructions for Uniform DOD Provisioning Technical Documentation (PTD) to be furnished by the contractor. PTD requirements for this contract will be specified on a Contractor Data Requirements List (CDRL), DD Form 1423, and listed on the Provisioning Technical Documentation Data Selection Sheet, DD Form 1949-1. This standard is used in conjunction with MIL-STD-1561, Provisioning Procedures, Uniform DOD, which prescribes terms and conditions governing provisioning of end items procured by the Department of Defense.

2. REFERENCE DOCUMENTS.

2.1 The issues of the following documents in effect on the date of the solicitation of a contract award form a part of this standard to the extent specified herein.

STANDARDS

| | |
|--------------|---|
| MIL-STD-12 | Abbreviations for Use on Drawings and Technical Type Publications |
| MIL-STD-100 | Engineering Drawing Practices |
| MIL-STD-1561 | Provisioning Procedures, Uniform DOD |

SPECIFICATIONS

| | |
|-----------------|---|
| MIL-M-81927(AS) | Manuals, Technical; General Preparation of |
| MIL-M-81928(AS) | Manuals, Technical; Aircraft Equipment and Component Maintenance Preparation of |
| MIL-M-81929(AS) | Manuals, Technical: Illustrated Parts Breakdown; Preparation of |

PUBLICATIONS

Department of Defense

H4-1 Cataloging Handbook - Federal Supply Code for Manufacturers
 United States and Canada - Name to Code

H4-2 Cataloging Handbook - Federal Supply Code for Manufacturers
 United States and Canada - Code to Name

H6-1 Cataloging Handbook - Federal Item Identification Guides
 for Supply Cataloging

4100.38M Provisioning and other Pre-procurement Screening

DOD Instruction

4100.39M Defense Integrated Data System (DIDS)

MCAIR Report

P.S. 1058 Post Conference Provisioning Tape Preparation for F-18

3. DEFINITIONS. For the purpose of this standard, the following definitions shall apply.

3.1 Assembly. A number of parts or subassemblies or any combination thereof joined together to perform a specific function and capable of disassembly. (Examples: Power shovel-front, fan assembly, audio frequency amplifier.) NOTE: The distinction between an assembly and subassembly is determined by the individual application. An assembly in one instance may be a subassembly in another where it forms a portion of an assembly.

3.2 Attaching Part. An item used to attach assemblies or parts to the equipment or to each other.

3.3 Component. An assembly or any combination of parts, subassemblies and assemblies mounted together normally capable of independent operation in a variety of situations.

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NAVAL POSTGRADUATE SCHOOL MONTEREY CALIF

F/G 1/3

AN ANALYSIS OF PROPOSED CONTRACTOR PROVISIONING OF THE F-18 AIR--ETC(U)

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3.4 Design Change. A Government approved engineering change incorporated into the end item which modifies, adds to, deletes or supercedes parts in the end item.

3.5 End Item. A final combination of end products, component parts, and/or materials which is ready for its intended use, e.g., ship, tank, mobile machine shop, aircraft receiver, rifle, or recorder.

3.6 Part. One piece, or two or more pieces, joined together which are not normally subject to disassembly without destruction or impairment of designed use.

3.7 Subassembly. Two or more parts which form a portion of an assembly or a component replaceable as a whole, but having a part or parts which are individually replaceable. (Examples: Gun mount stand, window recoil mechanism, floating piston, IF strip, mounting board with mounted parts.)

4. GENERAL REQUIREMENTS. The contractor will establish a Weapons System data base which will include all CFE items used on the F/TF-18/A-18 aircraft, GSE, training equipment and GFE as authorized by the PRS. This data base will include SMR codes, initial allowance, cataloging, and procurement data. Spare and repair parts requirements will be developed from this data base. The data base will be maintained in accordance with the instructions contained in the PRS and will be submitted to the Navy via ADP magnetic tape according to the schedule designated in the PRS. The discrete data elements required are identified in the Provisioning Technical Data Selection Sheet (PTDSS), DD Form 1949-1. Further clarification of data elements specified on DD Form 1949-1 will be documented in MCAIR Report P.S. 1058.

- 4.1 Preparation of Manual Lists. Not Applicable.
- 4.1.1 Composition and Reproduction. Not Applicable.
- 4.1.2 Format and Size. Not Applicable.
- 4.1.2.1 Not Applicable.
- 4.1.2.2 Not Applicable.
- 4.1.2.3 Not Applicable.
- 4.1.2.4 Not Applicable.
- 4.1.2.5 Not Applicable.
- 4.1.2.6 Not Applicable.
- 4.1.2.7 Not Applicable.
- 4.1.2.8 Not Applicable.
- 4.1.2.9 Not Applicable.
- 4.1.3 Binding. Not Applicable.
- 4.2 Preparation of Electrical Accounting Machine (EAM) Punched Cards. Not Applicable.
- 4.3 Preparation of Magnetic Tapes. The magnetic tapes shall be prepared in accordance with Figures I and II of DID-V-2172.
- 5. DETAILED REQUIREMENTS.
- 5.1 Detailed Instructions for Manual and Mechanical Preparation of PTD. Not Applicable.
- 5.1.1 PTD Identification. Not Applicable.
- 5.1.1.1 Procurement Instrument Identification (PII). Not Applicable.
- 5.1.1.2 Nomenclature or Model or Type Number. Not Applicable.
- 5.1.1.3 Control Data. Not Applicable.
- 5.1.1.4 Prime Contractors Federal Supply Code for Manufacturer. Not Applicable.
- 5.1.1.5 Submission Control Code. Not Applicable.

- 5.1.1.6 Data List Submitted. Not Applicable.
- 5.1.1.7 Page Number. Not Applicable.
- 5.1.2 Not Applicable.
- 5.1.3 Not Applicable.
- 5.1.4 Provisioning Control Data.
- 5.1.4.1 Card Format Identifier (CFI). Not Applicable.
- 5.1.4.2 Provisioning Contract Control Number (PCCN). The PCCN shall be constructed as follows:

The first position shall contain the Service Designator P.

The second position shall be the year of the contract award.

The third through the fifth positions shall contain a specifically assigned Control Number supplied by the PA.

If the Control Number is segmented, the segment code shall be entered in the sixth position. If Control Number segments are not applicable, the sixth position shall be left blank.

- 5.1.4.3 Card Sequence Number. Not Applicable.

5.1.5 Provisioning Format. The provisioning format is not applicable; however, the following data elements will be captured in the weapons system file for provisioning and transitioning to the ASO file.

- 5.1.5.1 Block No. 1 - Provisioning List Item Sequence Number (PLISN) - 6 Positions. The contractor shall enter a sequential line item control code for each item. The first four positions shall be right justified. These

5.1.5.1 Cont'd - numbers will always contain an alphabetic character in the first position. A PLISN must be assigned for each line item. However, when multiple appearances of the same part number occur, the PLISN of the first appearance shall be assigned for provisioning screening purposes. Multiple part numbers which represent the same line item shall be identified by the same PLISN; i.e., specification, source control part numbers.

5.1.5.2 Block No. 2 - Indenture (Ind) - 1 Position.

5.1.5.2.1 Relation of the Line Item to the System or End Item. A letter inserted in this block illustrates a lateral and descending "family tree" relationship of each line item to and within the system or end item and its discrete components (units), assemblies and subassemblies, and sub-subassemblies.

5.1.5.2.2 Attaching Hardware: Option #4. All parts indicated on the drawing will be listed in the weapons system file in proper indenture without specific identification that the parts are utilized as "attaching parts" and for inclusion of kit components.

5.1.5.2.3 Not Applicable.

5.1.5.2.4 Repair Kits, when applicable, will be sequenced at the end of the breakdown of the item being supported.

5.1.5.3 Block No. 3 - Federal Supply Code for Manufacturers (FSCM) - 5 Positions. Codes used in this block are published in Federal Cataloging Handbook H4 series. The code number assigned in this block identifies the manufacturer of each line item and shall correspond to the manufacturer whose reference number is reflected in the record. If the contractor has not been assigned a FSCM, he shall request the assignment of a code from the Provisioning Activity. When different FSCMs are assigned to different plant locations of the same manufacturer, the FSCM describing the plant

5.1.5.3 Cont'd - location where the equipment is actually manufactured shall be entered. NATO Codes shall be used when established.

5.1.5.4 Block No. 4 - Manufacturer's Part Number - 16 Positions.

Manufacturer's/Reference Part Numbers shall be included regardless of Reference Number Variation Code.

5.1.5.4.1 Each number entered in this field shall identify only a single design item which can be categorized by DOD Cataloging Manual 4100.38M.

5.1.5.4.2 First Precedent Reference Number. When the line item is identified by a Government or industry association specification, drawing or standard number, e.g., FED MIL, JAN, AN, NEMA, SAE, which completely identifies the item including its physical, mechanical, electrical and dimensional characteristics, this number is the preferred number and shall be furnished in this block. When a Government or industry association specification or standard number does not fully identify the item, the identifying actual manufacturer's number shall be listed and the specification shall be listed as an additional reference number.

5.1.5.4.3 Second Precedent Reference Number. (1) The part, drawing or catalog number of the actual manufacturer who supplies the item or the prime contractor's number (when the prime contractor is the actual manufacturer and exercises design control) is inserted in this block. For the purpose of this block, the manufacturer is the company or Government activity exercising design control over the item. Each number shall identify only a single design item; it cannot identify two or more similar items. (See subparagraph 5.1.5.4.4 with respect to additional reference numbers). When the part number and drawing number differ, each shall be included. (2) When the prime contractor modifies or tests the item on special test equipment according to

5.1.5.4.3 Cont'd - the prime contractor's specification, his part number is entered in this field as the actual manufacturer. Part numbers assigned by the prime contractor to identical parts identified by a different manufacturer's part number shall be entered in this field as an additional reference number.

5.1.5.4.4 Additional Reference Numbers (ARN). The intent of requesting that the contractor provide additional reference numbers is not to require the contractor to search for the additional reference numbers but to provide those that are known and available as a result of the contractor's design and production experience.

5.1.5.4.4.1 When more than one manufacturer's part number identifies a single design item (i.e., two or more items are completely interchangeable for the specific application), the additional reference number(s) which have been validated by the contractor as completely interchangeable for the specific application and which will not invalidate the end item warranty shall also be furnished and identified (cross-referenced) to the same item sequence number with the exception of non-consumable items.

5.1.5.4.4.2 Not Applicable.

5.1.5.4.4.3 Not Applicable.

5.1.5.4.4.4 Not Applicable.

5.1.5.5 Block No. 5 - Long Reference Part Number Code - 1 Position.

When a manufacturer's part number or additional reference numbers exceed 16 positions in length, the overflow portion shall be listed directly beneath the first 16 positions on the next line(s) of the list. The letter "A" shall appear immediately to the right of the first 16 positions in the Long Reference Number Code (LRNC) block. The letter "B" shall appear in the LRNC

5.1.5.5 Cont'd - block for the overflow portion on the next line of the list. The FSCM shall be repeated for succeeding lines of long reference numbers for the same manufacturer's number.

| FSCM | REFERENCE NUMBER | L | R |
|-----------|--|---|---|
| | | R | N |
| | | N | C |
| | | C | C |
| 1 2 3 4 5 | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 | 1 | 1 |
| X X X X X | X X X X X X X X X X X X X X X X | A | 3 |
| X X X X X | X X X X X X X X X | B | |
| X X X X X | X X X X X X X X X X X X X X X X | A | 3 |
| X X X X X | X X X X X X X X X | | |

Category Explanation

5 Secondary Reference. Any additional number of informative reference assigned to an item of production or supply by a commercial or Government organization, which represents the same item of production or supply to which the NSN was assigned. Includes additional numbers assigned by the design control organization; additional numbers assigned by other than the design control organization. Excludes superseded or discontinued reference numbers which may have resulted from: a manufacturer's change in numbering system, the manufacturer no longer produces the item or is no longer a technically approved source, the manufacturer or supplier for that number is out of business.

7 Specification Control Reference. The number assigned by a design control manufacturer of an end item or equipment, including a Government activity, to a drawing which delineates a commercial or vendor item for which all of the engineering and test requirements specified can

7 Cont'd - be met without imposing restrictions essential in source control procurement. Includes only those drawings which meet the definition for "specification control drawing" in MIL-STD-100. Specification control drawings are administrative control numbers and shall not be used as part identification numbers.

5.1.5.7 Block No. 7 - Reference Number Format Code - 1 Position. A code which identified the format mode of a logistics reference number used in both engineering and logistics data systems.

CODE EXPLANATION

- 1 Number is formatted in accordance with DOD 4100.38-M, paragraph 4.100.4 and 4.400 (i.e., DIDS in the clear).
- 2 Number is formatted in accordance with Federal Manual for Supply Cataloging M1-6.
- 3 Number format is unknown as to whether number is restructured or "in-the-clear."

5.1.5.8 Block No. 8 - Item Name - 19 Positions. An item name with appropriate adjective modifier as contained in Cataloging Handbook H6-1, when applicable. Abbreviations shall not be used.

5.1.5.9 Block No. 9 - Quantity per Assembly (QTY/ASSY) - 4 Positions.

5.1.5.9.1 Option A.

5.1.5.9.1.1 Enter the total number of times the line item is used in the assembly of which it is a part.

5.1.5.9.2 Option B. Not Applicable.

5.1.5.9.2.1 Not Applicable.

5.1.5.10 Block No. 10 - Quantity per End Item (QTY/EI) - 5 Positions.

Enter the total number of times an item is used within a PCCN.

5.1.5.10.1 In this block the contractor shall insert a figure indicating the total number of times the line item is used in the complete equipment or end item.

5.1.5.10.2 The quantity per equipment or end item shall be entered only on the first appearance of the item on the list. Subsequent appearances of the same item should be indicated by printing in this block of the format the letters "REF" to indicate that the total number of uses of the item in the equipment or end item has previously been listed.

5.1.5.11 Block No. 11 - Unit of Measure (U/M) - 2 Positions. Enter the unit of measure as defined in Appendix 3-E-2.52 of DOD 4100.39M for the quantity indicated in the Total Quantity Recommended Block. The Unit of Measure is abbreviated: dz, ea, ft, gl, in, lb, oz, etc., for dozen, each, foot, gallon, inch, pound, ounce, etc., respectively.

5.1.5.12 Block No. 12 - Source, Maintenance and Recoverability (SMR) Code - 6 Positions. SMR Codes are a series of alpha or alphanumeric symbols used at the time of provisioning to indicate the source of supply of an item, its maintenance implications, and recoverability characteristics. SMR codes shall be assigned in accordance with NAVAIR Instruction 4423.3B. The contractor shall develop/enter SMR Codes in accordance with the approved maintenance plan or other criteria provided by the PA.

5.1.5.13 Block No. 13 - National Stock Number and Related Data Codes - 20 Positions. The contractor will enter data in the NSN field above the respective blocks as follows:

| <u>Data Element</u> | <u>Positions</u> |
|-----------------------|------------------|
| Cognizance Code | 1 - 2 |
| Material Control Code | 3 |

5.1.5.13 Cont'd -

| | |
|---------------------------------|---------|
| NSN | 4 - 16 |
| Special Material Identification | |
| Code (if indicated) (SMIC) | 17 - 18 |
| Blank | 19 - 20 |

5.1.5.14 Block No. 14 - Usable on Code - 4 Positions. Usable on codes shall be used to indicate production effectivity. A suitable legend, similar to the examples shown in MIL-M-8910 (replaced by MIL-M-008910A) (AS)) shall be provided to the PA.

5.1.5.15 Block No. 15 - Same as PLISN - 6 Positions. For subsequent appearance of the same item on the same list, enter the Provisioning List Item Sequence Number of the item in its first appearance.

5.1.5.16 Block No. 16 - Failure Factor I - 6 Positions. The contractor shall enter Maintenance Replacement Rates (%) as Failure Factor I in the following order of precedence:

- (a) As developed by the approved Maintenance Plan.
- (b) As indicated on the condensed DLSC screening List/Tape, if available.
- (c) As developed in accordance with other criteria provided by the PA.

The Failure Factor I will be indicated as one whole number and three decimal places, with the decimal point understood. Right justified. The fourth decimal position of the condensed list/tape factor shall be rounded off into the third decimal position of the Failure Factor I field of the Provisioning Format.

- 5.1.5.17 Block No. 17 - Failure Factor II - 6 Positions. Rework Removal Rates/Overhaul Replacement Factors shall be entered as Failure Factor II in accordance with the approved Maintenance Plan or developed in accordance with other criteria provided by the PA.
- 5.1.5.18 Block No. 18 - Essentiality Code (EC) - 1 Position. The contractor shall assign either Code 1 or 3 as applicable. Codes 5, 6 and 7 shall not be assigned.
- 5.1.5.19 Block No. 19 - Shelf Life Code (SL) - 1 Position. An alpha or numeric code assigned to an item to indicate a storage or shelf life time period for an item possessing deteriorative or unstable characteristics. Codes shall be assigned as applicable from the current edition of Appendix 3-E-2.10 of DOD 4100.39-M DIDS Procedures Manual.
- 5.1.5.20 Block No. 20 - Production Lead Time (PLT) - 2 Positions. The computed or expected value expressed in months of time interval between the placement of a new contract and shipment of the first deliverable quantity.
- 5.1.5.21 Block No. 21 - Unit Price - 10 Positions. Enter the best estimated price per unit of the line item. The last two positions are cents, with the decimal point understood, and the entry is right justified.
- 5.1.5.22 Block 22 - Quantity Unit Pack (QUP) - 3 Positions. Enter the number of units of an item packaged as a unit pack.
- 5.1.5.23 Block No. 23 - Total Quantity Recommended - 6 Positions. The recommended quantity of the item required to support a specific number of applications for a specific period of time. The applications may be to weapon system, end item, component or combinations thereof which are contained in the applicable contract. The contractor or vendor shall base his recommendations on the anticipated failure pattern utilizing defined

5.1.5.23 Cont'd - usage parameters of the item and the known delivery schedule. Unless otherwise advised by the Provisioning Activity, the support period shall be for one year beginning with the scheduled delivery of the first end item(s). This field shall also be used to indicate the quantity pro-rated as applicable to the superseding item resulting from Design Changes.

5.1.5.24 Block No. 24 - Reference Designation (Reference Symbol Number). Not Applicable.

5.1.5.24.1 Not Applicable.

5.1.5.24.2 Not Applicable.

5.1.5.25 Block No. 25 - Reference Designation Overflow Code (RDOC). Not Applicable.

5.1.5.26 Block No. 26 - Reference Designation Code (RDC). Not Applicable.

5.1.5.27 Block No. 27 - Type of Item Code - 3 Positions. This field is divided into three sub-fields. If any of the sub-fields are not applicable, the contractor shall leave that sub-field blank.

5.1.5.27.1 First Position: Special Material Content Code. Enter a code to indicate that an item represents or contains peculiar material requiring special treatment, precautions, or management control of the item.

5.1.5.27.2 Second Position: Provisioning List Category Code. Enter a code to indicate whether the item is documented on a special list or is a government furnished item.

5.1.5.27.3 Third Position: Special Maintenance Category Code. Enter a code to indicate any special maintenance category applicable to line item.

5.1.5.28 Block No. 28 - Physical Security/Pilferage Code - 1 Position. In accordance with the instructions of the provisioning activity, the contractor shall insert in this block the authorized code contained in Appendix 3-E-2.22 of DOD 4100.39-M.

5.1.5.29 Block No. 29 - Special Handling Code - 1 Position. When required by the provisioning activity, special handling codes may be entered in this block.

5.1.5.30 Block No. 30 - Phased Provisioning Code (PPC) - 1 Position. When MIL-STD-1517 applies, the contractor shall insert the letter P if the item is recommended for phased provisioning.

5.1.5.31 Block No. 31 - Procurement Control Identifier (PCI). Not Applicable.

5.1.5.32 Block No. 32 - Prior Item (PLISN) - 6 Positions. When requested by the provisioning activity, the contractor shall enter the Provisioning List Sequence Number which appeared on the Interim Repair Parts Lists or the Long Lead Items Lists if applicable. It will also be used when the resequencing of a Provisioning List becomes necessary during the provisioning process.

5.1.5.33 Block No. 33 - Remarks - 12 Positions. These positions are intended for use only by both the contractor and the provisioning activity to set forth only explanatory type data which is considered essential to the provisioning process; e.g., note codes that call out lengthy or repetitious annotations on a preface sheet to the Provisioning List.

5.1.5.34 Block No. 34 - Next Higher Assembly Provisioning List Items Sequence Number (NHA/PLISN) - 6 Positions. Enter the next higher assembly PLISN.

5.1.5.35 Block No. 35 - Overhaul Quantity (OHL-QTY) - 3 Positions. When requested by the provisioning activity, the contractor shall enter the quantity required of this line item for each component, assembly or sub-assembly that has a planned overhaul schedule.

5.1.5.36 Block No. 36 - Maintenance Task Distribution. Not Applicable.

5.1.5.37 Block No. 37 - Contractor Turn-Around-Time (CONT TAT) - 3

Positions. When the contractor is responsible for maintenance service arrangements enter the time in days that will elapse from the time of receipt of the failed item at the contractor's facility until the item is returned to the designated receiving point.

5.1.5.38 Block No. 38 - Maximum Allowable Operating Time (MAOT).

Not Applicable.

5.1.5.39 Block No. 39 - Maintenance Action Code. Not Applicable.

5.1.5.40 Block No. 40 - Failure Factor III - 6 Positions. Complete Engine Repair (CER) and Carrier Rates will be assigned as Failure Factor III and provided by the PA.

5.2 DETAILED INSTRUCTIONS FOR STANDARD KEYPUNCHING AND INTERPRETING OF 80 COLUMN PUNCHED CARD MACHINE (PCM) CARDS. Not Applicable.

5.3 DETAILED INSTRUCTIONS FOR DESIGN CHANGES (DCN'S).

5.3.1 Design Change Notices shall be submitted on magnetic tapes with the following specific requirements including the data elements indicated on DD Form 1949-1: In complete "Family Packages"; i.e., repairable assemblies and their related spares and repair parts. All affected part numbers shall be DLSC screened prior to submittal. DLSC output data shall accompany all submittals. SPTD shall be submitted with DCNs in accordance with paragraph 5.3.8 of MIL-STD-1561 including next higher assembly drawings.

5.3.2 Design Change Data Elements.

5.3.2.1 Block No. 41 - Change Authority Number - 18 Positions. Reflect the engineering change authority number as follows:

ECP Number including dash number and revision number -
10 positions. Drawing design change letter, EO number
and EO revision (in the event a manufacturer of an item

5.3.2.1 Cont'd - does not use DCN/EO's the date of the drawing affecting the change will be used.) -
8 Positions.

5.3.2.2 Block No. 42 - Interchangeability Code - 2 Positions. Enter an alphabetic code to indicate interchangeability when an item previously listed is being replaced by a new item because of a design change or other change. The codes to be used are:

| <u>Code</u> | <u>Explanation</u> |
|-------------|--|
| OW | This code signifies one way interchangeability as follows: (1) When used for a change to the original item, OW means that the original item may be used until exhausted. (2) When used for the replacement item, OW means that the new item may be used to replace the original item. |
| TW | This code signifies that the original item and the replacement item are interchangeable with each other. |
| NI | This code signifies that the items are not interchangeable as follows: (1) When used for the original item, NI means that the item is not interchangeable with the replacement item. (2) When used for the replacement item, NI means that the replacement item is not interchangeable with the original item. |
| OM | This code signifies that the original item is interchangeable with the replacement item only if modified to the replacement item configuration and only in the new application. |

| <u>Code</u> | <u>Explanation</u> |
|-------------|---|
| TM | This code signifies that the original item is interchangeable in both the old and new application only if the original item is modified to the replacement configuration. |
| 5.3.2.3 | <u>Block No. 43 - Serial Number Effectivity (From), in Increments of 6 Positions.</u> Serialization of aircraft shall be indicated by Bureau Numbers (BUNOS). When effectivity is split among multiple Serial numbers/BUNOS are required, a suitable legend, similar to the examples shown in MIL-M-8910 shall be provided to the PA. |
| 5.3.2.4 | <u>Block No. 44 - Serial Number Effectivity (To), in Increments of 4 Positions.</u> Shall be expressed the same as Block No. 43. Blocks No. 43 and 44 shall indicate spares effectivity. |
| 5.3.2.5 | <u>Block No. 45 - Total Item Change (TIC) - 2 Positions.</u> Enter the total number of times the line item is affected by the design change. |
| 5.3.2.6 | <u>Block No. 46 - Replaced or Superseding Provisioning List Item Sequence Number (PLISN) - 6 Positions.</u> Enter the PLISN of the replaced or superseding item in this field. |
| 5.3.2.7 | <u>Block No. 47 - Quantity Shipped - 5 Positions.</u> Enter the quantity shipped. |
| 5.3.2.8 | <u>Block No. 48 - Quantity Procured (Quantity Prorated) - 5 Positions.</u> The contractor shall enter the total quantity of the provisioned item order. |
| 5.3.3 | <u>Instructions for Figure 1 and Figure 2.</u> Not Applicable. |
| 5.3.4 | <u>Design Change Conditions.</u> Not Applicable. |
| 5.4 | <u>SUPPLEMENTAL PCPL INTERFACE TAPE DATA ELEMENTS, lines F thru Q.</u> |
| 5.4.1 | Elements for line F are as follows: |

- 5.4.1.1 C018 - Change Code - Blocks 13-14. The code entered in this block describes the instruction to be carried out by the ASO computer for file operation.
- 5.4.1.2 D006 - Reference Number Variation Code - Blocks 15-17.
Enter a numeric code to indicate whether or not the number is item identifying.
- 5.4.1.3 D001B - Document Availability Code - Blocks 18-20. Enter an alphanumeric code to indicate the availability of technical documentation to the submitting activity of a reference number of an item identification.
- 5.4.1.4 D002 - Reference Data Suppression Code - Blocks 21-23.
Enter an alpha code to designate the status of a reference number and/or alternate data stored in the reference number trailer.
- 5.4.1.5 C038 - Reference Number Status Code - Blocks 24-26. Enter an alpha code to identify the reference number(s) within a given item record to be used in procurement.
- 5.4.1.6 TD - Technical Data - Block 27. Enter a code in conjunction with Document Availability Code (Block 51) to indicate the reason why technical data cannot be furnished in accordance with DOD policy.
- 5.4.1.7 D125N - Non-Consumable Item Material Support Request Code - Block 28. Enter a code to indicate the degree of material support to be obtained by the SICA from the PICA or to identify the service and/or source of repair.
- 5.4.1.8 D093 - Manager MOE Rule Number - Blocks 29-32. Enter an alphanumeric code which represents a specific Major Organizational Entity (MOE) rule and applies to the Primary Inventory Control Activity (PICA) having whole-sale management responsibilities of an item or group of items of supply.
- 5.4.1.9 D094 - Multi-Manager MOE Rule - Blocks 33-40. Not Applicable

- 5.4.1.10 D095 - User MOE Rule - Blocks 41-44. Enter an alphanumeric code which represents a specific Major Organizational Entity (MOE) rule and applies to the Secondary Inventory Control Activity (SICA) having retail management responsibilities of an item or group of items of supply.
- 5.4.1.11 D096 - Supplemental II Data Collaborators - Blocks 45-47.
Used to record ASO as a collaborator on proposed revisions to II Data.
Constant "NKE".
- 5.4.1.12 D097 - Supplemental II Data Receivers - Blocks 48-50. Used to record ASO as an automatic receiver on distribution of recorded II Data.
Constant "NKE".
- 5.4.1.13 B002 - Local Routing Code - Blocks 51-55. Enter an alphanumeric code which identifies the internal organization component within ASO to which item inputs are to be routed for action.
- 5.4.1.14 D022 - Type of Item Identification - Block 56. Enter an alphanumeric code for each existing or potential item of supply to indicate the identification method employed, or to be employed.
- 5.4.1.15 ISN - Item Serial Number - Blocks 57-60. Enter a numeric for control and submittal of SSR and PSI items to Defense Supply Centers and other WIMM services.
- 5.4.1.16 ISQ - Initial Support Quantity - Blocks 61-65. For non-ASO cognizant items enter the numeric value representing the retail quantity requirements.
- 5.4.1.17 RSQ - Replenishment Support Quantity - Blocks 66-70. For non-ASO cognizant items enter the numeric value representing the replenishment quantity requirements.
- 5.4.1.18 C011 - Provisioning Document Control Number - Blocks 73-79.
Not required.

5.4.2 Elements for line G are as follows:

5.4.2.1 C016 - Item Management Code - Block 13. Enter an alpha-numeric code that indicates whether an item of supply shall be subject to integrated management, or shall be retained by the individual military services, or other DOD component, for their management.

5.4.2.2 C020 - Item Management Justification Code - Block 14.
Enter an alpha code to indicate the rationale employed in determining the appropriate Item Management Code.

5.4.2.3 D014A - Issue, Repair and/or Requisition Restriction Code - Blocks 15-16. Enter an alphanumeric code that indicates the restrictions on issuing, or instructions for requisitioning, item repair/overhaul, turn-in, exchange or disposal.

5.4.2.4 E089 - Requisition Advise Code - Block 17. Enter an alpha code denoting how, as distinguished from where, and under what restrictions an item will be acquired.

5.4.2.5 D017 - Demilitarization Code - Block 18. Enter an alpha code to indicate the method and degree of demilitarization required for items subject to disposal.

5.4.2.6 D028 - Model Code/Repairable Identification Code - Blocks 19-27. Enter an alphanumeric code for each repairable/field level repairable item, for identification purposes.

5.4.2.7 F007 - Wearout Rate - Blocks 28-30. Enter a decimal rate which represents the percentage of depot repairable items that fail, which will not, through repair, be returned to serviceable condition.

5.4.2.8 F009 - Repair Survival Rate - Blocks 31-33. Enter a decimal rate which represents the percentage of reported non-serviceable repairable assets which will, through depot level overhauls, be returned to a serviceable condition.

- 5.4.2.9 F008 - Service Life - Blocks 34-37. Enter an expressed period of time after which certain items will be replaced, overhauled, recalibrated, repaired, or inspected. This element of data is applied only to those items for which there is an established maintenance policy.
- 5.4.2.10 F008A - Service Life Code - Block 38. Enter an alpha code to designate the unit of measure which is used to express the service life of the item.
- 5.4.2.11 F008B - Service Life Action Code - Block 39. Enter an alpha code to indicate the required action to be taken at the expiration of the service life period.
- 5.4.2.12 B067E - Program Related Code - Block 40. Enter an alpha code indicating whether an item is program related for future demand.
- 5.4.2.13 F016 - Designated Overhaul Point #1 - Block 41-42. Enter an alphanumeric code that designates the Depot Level Repair Facility, identified by NAVAIR/ASO, responsible for repair, rework or renovation of an investment item.
- 5.4.2.14 F016 - Designated Overhaul Point #2 - Blocks 47-52. Enter an alphanumeric code that designates the Depot Level Repair Facility, identified by NAVAIR/ASO, responsible for repair, rework or renovation of an investment item.
- 5.4.2.15 F010E - Progressive Rework Turn-Around-Time (East) - Blocks 53-55. Enter the number of days between the removal of a repairable item from a higher assembly, and the time the repairable item is available, through repair, for reinstallation.
- 5.4.2.16 F011E - Progressive Rework Allowed Off Time (East) - Blocks 56-57. Enter the number of days a repairable item may be allowed to remain off a larger assembly which is going through progressive rework.

5.4.2.17 D016/D016A - 1st Alternate NIIN/ACN - Blocks 58-68. Enter the NIIN/ACN reference to an item citing, under specific circumstances, the degrees of interchangeable relationship with another item.

5.4.2.18 D016/D016A - 2nd Alternate NIIN/ACN - Blocks 58-68. Enter the NIIN/ACN reference to an item citing, under specific circumstances, the degree of interchangeable relationship with another item.

5.4.3 Elements for Line H.

5.4.3.1 D009 - Allowance Application Code - Blocks 13-19. Enter a code to identify the initial outfitting list (IOL) to which the item is related.

5.4.3.2 D011 - Quantity per Application - Blocks 20-23. Enter the quantity of an item contained as part of a specific allowance.

5.4.3.3 C006 - Peculiar/Common Flag and Time Phase Flag - Blocks 24-25.
Under development by Allowance Control Division.

5.4.3.4 F001 - Maintenance Replacement Rate, IOL Part 1 - Blocks 26-31.
Enter a decimal rate which represents the provisioning estimate of the expected rate of demand per maintenance cycle for a particular application of an item at the organizational and the intermediate level.

5.4.3.5 IOL Part - Block 32. Enter a "1" to indicate IOL Part 1.

5.4.3.6 F001 - Maintenance Replacement Rate - Blocks 33-38. Enter a decimal rate which represents the provisioning estimate of the expected rate of demand per maintenance cycle for a specific IOL.

5.4.3.7 IOL Part - Block 39. Enter a specific numeric to indicate the IOL part for which the F001 in Blocks 33-38 applies.

5.4.3.8 F001 - Maintenance Replacement Rate - Blocks 40-45. Enter a decimal rate which represents the provisioning estimate of the expected rate of demand per maintenance cycle for a specific IOL.

- 5.4.3.9 IOL Part - Block 46. Enter a specific numeric to indicate the IOL part for which the F001 in Blocks 40-45 applies.
- 5.4.3.10 F001A - Rotable Pool Factor - Blocks 47-52. Enter a decimal rate which represents the provisioning estimate of the expected rate of demand per maintenance cycle for a particular IOL which applies to part II.
- 5.4.3.11 F010E - Progressive/IMA Rework TAT (East) - Blocks 53-55.
Enter the number of days between the removal of a repairable item from a higher assembly, and the time the repairable item is available, through repair, for reinstallation, applicable to IOL part II.
- 5.4.3.12 IOL Part - Block 56. Enter a "2" to indicate Part II IOL data.
- 5.4.3.13 F001A - Rotable Pool Factor - Blocks 57-62. Enter a decimal rate which represents the provisioning estimate of the expected rate of demand per maintenance cycle for a particular IOL.
- 5.4.3.14 F010E - Progressive/IMA Rework TAT (East) - Blocks 63-65.
Enter the number of days between the removal of a repairable item from a higher assembly, and the time the repairable item is available, through repair, for reinstallation, applicable to IOL other than part II.
- 5.4.3.15 IOL Part - Block 66. Enter a numeric to indicate the IOL part for which the F001A in Blocks 57-62 applies.
- 5.4.3.16 F001A - Rotable Pool Factor - Blocks 67-72. Enter a decimal rate which represents the provisioning estimate of the expected rate of demand per maintenance cycle for a specific IOL.
- 5.4.3.17 F010E - Progressive/IMA Rework TAT (East) - Blocks 73-75.
Enter the number of days between the removal of a repairable item from a higher assembly, and the time the repairable item is available, through repair, for reinstallation, applicable to IOL other than part II.

- 5.4.3.18 IOL Part - Block 76. Enter a numeric to indicate the IOL part for which the F001A in Blocks 67-72 applies.
- 5.4.3.19 F006 - Allowance Note Code - Block 77. Enter an alphanumeric code to refer to specific instructions or information in the allowance document. (Under development by Allowance Branch.)
- 5.4.3.20 Block No. 104 - Blank.
- 5.4.3.21 Maintenance Support Package - Block 79. Not required.
- 5.4.4 Elements for Line J.
- 5.4.4.1 D030 - Supplementary Technical Data - Blocks 13-57. Enter supplementary data to define vital technical characteristics.
- 5.4.4.2 C004C - Item Name Navy - Blocks 53-74. Not required.
- 5.4.4.3 B280 - Material Support Date - Blocks 75-79. Enter the date on which ASO assumed or is scheduled to assume, Navy material support responsibility for an item.
- 5.4.5 Element for Line K.
- 5.4.5.1 D009 - Application Code - Blocks 13-22. Enter an alphanumeric code to identify the higher level item to which the item is related.
- 5.4.5.2 D029 - Application/Identification Number Activity Code - Blocks 23-24. Enter an alpha code to specify the nature or type of Model Code RIC (Repairable Identification Code) or application code.
- 5.4.5.3 D013A/B - Blank - Blocks 25-26.
- 5.4.5.4 D011 - Quantity Per Application - Blocks 27-30. Enter the quantity of an item contained as part of its specific next higher entity.
- 5.4.5.5 F015 - Concurrent Rework Code - Block 31. Enter a code to indicate whether or not the item is reworked concurrently with the end item or weapon on which it is installed.

5.4.5.6 F018 - Percent Per Application - Blocks 32-34. Enter a numerical figure expressing the percentage of a specific application for which an item is required for support.

5.4.5.7 F006 - Allowance Note Code - Block 35. Enter an alphanumeric code used by technical personnel to refer to specific instructions of information in the allowance document.

5.4.5.9 D004/D005 - Allowance/Supplementary Technical Data - Blocks 36-79. Enter data to reference next higher assembly or other technical reference data such as allowance quantities, serial/bureau numbers effectivity. Block 36 must contain "A" for an allowance or "B" for bureau number spread.

5.4.5.10 C007 - Replacement Unit - Blocks 72-75. Enter the minimum quantity per a given application that is normally replaced/installed upon failure or scheduled replacement of one of the installed units.

5.4.5.11 C007A - Planned Maintenance Requirements Quantity - Blocks 76-78. Enter the quantity of material expressed in units of installation required to support the maintenance plan at the organizational level for the equipment/component.

5.4.5.12 C007B - Technical Override Designation Code - Block 79. Enter an alpha code that designates whether the quantity stored in Block No. 119 for a given application is a Planned Maintenance Requirement override or a technical override decision of the applicable technical command.

5.4.6 Elements for Line L.

5.4.6.1 D009 - Application Code - Blocks 13-22. Enter an alphanumeric code to identify the higher level item to which the item is related.

5.4.6.2 D029 - Application/Identification Number Activity Code - Blocks 23-24. Enter an alpha code to specify the nature or type of Model Code RIC (Repairable Identification Code) or application code.

- 5.4.6.3 D013A - Use Maintenance Code - Block 25. Enter the lowest maintenance level authorized to install, remove, replace, and use the item if different from application 1
- 5.4.6.4 D013B - Maintenance Repair Code - Block 26. Enter a code to indicate whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair if different from application 1.
- 5.4.6.5 D011 - Quantity Per Application - Blocks 27-30. Enter the quantity of an item contained as part of its specific next higher entity.
- 5.4.6.6 F015 - Concurrent Rework Code - Block 31. Enter a code to indicate whether or not the item is reworked concurrently with the end item or weapon on which it is installed.
- 5.4.6.7 F018 - Percent Per Application - Blocks 32-34. Enter a numerical figure expressing the percentage of a specific application for which an item is required for support.
- 5.4.6.8 E006 - Allowance Note Code - Block 35. Enter an alphanumeric code used by technical personnel to refer to specific instructions or information in the allowance document.
- 5.4.6.10 D004/D005 - Allowance/Supplementary Technical Data - Blocks 36-79. Enter data to reference next higher assembly or other technical reference data such as allowance quantities, serial/bureau numbers effectivity. Block 36 must contain "A" for an allowance or "B" for bureau number spread.
- 5.4.6.11 C007 - Replacement Unit - Blocks 72-75. Enter the minimum quantity per a given application that is normally replaced/installed upon failure or scheduled replacement of one of the installed units.

5.4.6.12 C007A - Planned Maintenance Requirement Quantity - Blocks 76-78. Enter the quantity of material expressed in Units of Installation required to support the maintenance plan at the organizational level for the equipment/component.

5.4.6.13 C007B - Technical Override Designation Code - Block 79.
Enter an alpha code that designates whether the quantity stored in Block No. 119 for a given application is a (Planned Maintenance Requirement) override or a technical override decision of the applicable technical command.

5.4.7 Elements for Line M.

5.4.7.1 D009 - Application Code - Blocks 13-22. Enter an alphanumeric code that identifies the higher level item to which the item is related.

5.4.7.2 D029 - Application/Identification Number Activity Code - Blocks 23-24. Enter an alpha code which specifies the nature or type of Model, or Application code.

5.4.7.3 D013A - Use Maintenance Code - Block 25. Enter an alphanumeric code which indicates the lowest maintenance level authorized to install, remove, replace and use the item if different from application 1.

5.4.7.4 D013B - Maintenance Repair Code - Block 26. Enter an alphanumeric code that indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair if different from application 1.

5.4.7.5 D011 - Quantity Per Application - Blocks 27-30. Enter a numeric code equal to the quantity of an item contained as part of its specific next higher entity.

- 5.4.7.6 F015 - Concurrent Rework Code - Block 31. Enter a numeric code for each application of a repairable assembly stock number to indicate whether or not the item is reworked concurrently with the end item.
- 5.4.7.7 F018 - Percent Per Application - Blocks 32-34. Enter a numeric figure expressing the percentage of a specific application for which an item is required to support.
- 5.4.7.8 E006 - Allowance Note Code - Block 35. Enter an alpha-numeric code. This code is used by technical personnel to refer to specific instructions or information in the allowance document.
- 5.4.7.10 D004/D005 - Allowance/Supplementary Technical Data - Blocks 36-79. Enter data to reference next higher assembly or other technical reference data such as allowance quantities, serial/bureau numbers effectivity. Block 36 must contain "A" for an allowance or "B" for bureau number spread.
- 5.4.7.11 C007 - Replacement Unit - Blocks 72-75: Enter a numeric code indicating the minimum quantity per a given application that is normally replaced/installed upon failure or scheduled replacement of one of the installed units.
- 5.4.7.12 C007A - Planned Maintenance Requirement Quantity - Blocks 76-78. Enter a numeric code. The quantity of material, expressed in units of Installation required to support the maintenance plan at organizational level for the equipment/component.
- 5.4.7.13 C007B - Technical Override Designation Code - Block 79. Enter an alpha code that designates whether the quantity stored in Planned Maintenance Requirement Quantity is either a Planned Maintenance Requirement Override or a Technical Override decision of the Application Technical Command.

5.4.8 Elements of Line N.

5.4.8.1 C021 - Packaging Requirements Code - Blocks 13-33. Enter an alphanumeric code which indicates the packaging requirements of an item.

5.4.8.2 C022 - Supplemental Packaging Data - Blocks 34-52. Enter an alphanumeric code. A description, or a reference to other sources which provides additional packaging data, when the standard military packaging code is not completely definitive.

5.4.8.3 C022A - Unit Package Dimensions - Blocks 53-64. Enter a numeric code. The gross overall dimensions per unit package in inches and tenths of an inch.

5.4.8.4 C023 - Gross Weight - Blocks 65-72. Enter a numeric code which will express the packaged weight of an item per unit package.

5.4.8.5 C024 - Gross Cube - Blocks 73-79. Enter a numeric code which express the packaged cube of an item per unit package.

5.4.9 Elements of Line P.

5.4.9.1 C027 - Type of Storage Code - Block 13. Enter an alpha code which indicates the type of storage space and environmental conditions required for an item during storage or shipment.

5.4.9.2 C029 - Shelf Life Action Code - Blocks 14-15. Enter an alphanumeric code denoting the action to be taken for an item at the expiration of the shelf life period.

5.4.9.3 C004A - Item Name Code - Blocks 16-20. Enter a numeric code which reflects the item name code assigned to an item name contained in cataloging Handbook H6-1.

5.4.9.4 D025 - Standardization Status Code - Block 21. Enter an alphanumeric code that reflects the standardization status identified by the National Stock Number.

5.4.9.5 D025E - Procurement Method Code - Block 22. Enter a numeric code which indicates the extent to which the item of supply is competitively procured.

5.4.9.6 D025F - Procurement Method Suffix Code - Block 23. Enter an alphanumeric code indicating the reason a particular procurement method is selected.

5.4.9.7 C009 - Procurement Activity Code - Blocks 24-25. Enter a code which identifies the activity that purchases the item of supply.

5.4.9.8 Blank - Blocks 26-27.

5.4.9.9 C008E - Military Essentiality Code (MEC) - Blocks 28-29.
Enter a numeric code which represents the military importance of a part in relation to a higher component, equipment, or mission. These two positions represent MEC's for applications 2 and 3.

5.4.9.10 C036 - Pre-Acceptance Test Requirement Code - Block 30.
Enter an alpha code for the purpose of signalling whether or not Pre-Acceptance/First Artical testing is required prior to the award of a contract to a prospective supplier.

5.4.9.11 F023 - Point of Inspection - Block 31. Enter an alpha code indicating where inspection of the item on contract will be performed.

5.4.9.12 C039B - Procurement Determination Procedure Level Code - Block 32. Enter an alpha code to indicate the procurement procedural level coding decision.

5.4.9.13 F024B - Non-Automated Technical Referral Code - Block 33.
Enter an alpha code which indicates item buys requiring manual technical review when processed by the buying operation.

5.4.9.14 D010 - Special Program Application Code - Blocks 34-35.

Enter an alphanumeric code used to identify selected items peculiar to programs requiring special management control and, to indicate special quality assurance inspection or manufacturing identification markings.

5.4.9.15 F001 - Fail Factor 1 (Maintenance Replacement Rate) -

Blocks 36-43. Enter a numeric code/decimal which represents the provisioning estimate of the expected rate of demand per maintenance cycle for a particular application of an item at the organizational and intermediate levels. Used to accomodate applications 2 and 3.

5.4.9.16 F003 - Overhaul Replacement/Rework Removal Rate - Blocks

44-49. Enter a numeric code which is the decimal rate assigned to a consumable item which represents the provisioning estimate of the expected rate of demand per overhaul cycle. For repairable items this decimal is the Rework Removal Rate percentage. Used to accomodate applications 2 and 3.

5.4.9.17 F001A - Rotable Pool Maintenance Rate - Blocks 50-57. Enter

a numeric code/decimal rate which represents the provisioning estimate of the expected rate of demand per maintenance cycle for a particular application of an item and represents one of the following. Used to accomodate applications 2 and 3.

- a. Rotable Pool Rate
- b. Complete Engine Repair Rate
- c. Carrier Replacement Rate

5.4.9.18 D018 - Repair Kits Reference Numbers - Blocks 58-79. Enter

an alphanumeric code. A manufacturer's code and reference number identifying a repair parts kit.

5.4.9.19 D019 - Assemblies Supported by Kits - Blocks 58-79. Enter
an alphanumeric code. A manufacturers code and reference number identifying
a repairable item which is supported by the Repair Kit.

5.4.10 Elements of Line Q. Not Applicable

| PROVISIONING TECHNICAL DOCUMENTATION DATA SELECTION SHEET | | Data blocks and media to be completed by contractor are indicated by an "X" below: | | | | | | | | | | | |
|--|--|---|---|---|---|---|---|---|---|--|--|--|--|
| | | P | P | S | P | C | P | R | D | | | | |
| | | L | P | L | P | B | C | I | C | | | | |
| | | | | | | I | L | P | L | | | | |
| SEQUENCE | | | | | | | | | | | | | |
| Topdown | | | | | | | | | | | | | |
| Disassembly | | | | | | | | | | | | | |
| Reference Symbol Number | | | | | | | | | | | | | |
| Part Number | | | | | | | | | | | | | |
| Other (Explain) | | | | | | | | | | | | | |
| MEDIA | | | | | | | | | | | | | |
| Hard Copy | | | | | | | | | | | | | |
| EMI Punched Cards | | | | | | | | | | | | | |
| Magnetic Tape Written in 7-bit, X 9-bit Binary Coded Decimal (BCD) format (even parity, X odd parity). Tape density shall be (check one) 200, 556, 1600 character per inch. Record length and number of characters per record will be 1400 | | | | | | | | | | | | | |
| BLOCK NO. | | | | | | | | | | | | | |
| A Procurement Instrument Identification (PIIN/SPIN) | | | | | | | | | | | | | |
| B Nomenclature or Model or Type Number | | | | | | | | | | | | | |
| C Control Data | | | | | | | | | | | | | |
| D Federal Supply Code for Manufacturers (FSCM) Prime | | | | | | | | | | | | | |
| E Subassembly Control Code | | | | | | | | | | | | | |
| F Date (YR MO DA) | | | | | | | | | | | | | |
| PROVISIONING DOCUMENTATION | | | | | | | | | | | | | |
| 1 Provisioning List Item Sequence Number (PLISN) | | | | | | | | | | | | | |
| 2 Indenture (IND) | | | | | | | | | | | | | |
| 3 Federal Supply Code for Manufacturers (FSCM) | | | | | | | | | | | | | |
| 4 Manufacturers Part Number | | | | | | | | | | | | | |
| 5 Long Reference Part Number Code | | | | | | | | | | | | | |
| 6 Reference Number Category Code | | | | | | | | | | | | | |
| 7 Reference Number Format Code | | | | | | | | | | | | | |
| 8 Item Name | | | | | | | | | | | | | |
| 9 Quantity Per Assembly | | | | | | | | | | | | | |
| 10 Quantity Per End Item | | | | | | | | | | | | | |
| 11 Unit of Measure | | | | | | | | | | | | | |
| 12 Source Maintenance and Recoverability (SMR) Code | | | | | | | | | | | | | |
| 13 National Stock Number | | | | | | | | | | | | | |
| 14 Useable on Code | | | | | | | | | | | | | |
| 15 Same as PLISN | | | | | | | | | | | | | |

DD Form 1949-1

Figure 1a

BLOCK NO.

Figure 1b

PROVISIONING DOCUMENTATION

BLOCK NO.

| | | P | S | C | P | R | D |
|-------|--|---|---|---|---|---|---|
| | | P | F | B | C | I | C |
| | | L | P | I | P | L | N |
| | | | L | L | T | | |
| D002 | Reference Data Suppression Code | | | | | | |
| C038 | Reference Number Status Code | | | | X | | |
| TD | Technical Data | | | | | | |
| D125N | Non-Consumable Item Material Support Request Code | | | | X | | |
| D093 | MOE Rule Code | | | | X | | |
| D094 | Multi-Manover MOE Rule | | | | | | |
| D095 | User MOE Rule | | | | X | | |
| D096 | Supplemental II Data Collaborators | | | | X | | |
| D097 | Supplemental II Data Receivers | | | | X | | |
| D092 | Local Routing Code | | | | X | | |
| D022 | Item Description Code | | | | X | | |
| ISN | Item Sequence Number | | | | X | | |
| ISQ | Initial Spares Quantity | | | | X | | |
| RSQ | Replenishment Support Quantity | | | | X | | |
| C011 | Provisioning Document Control Number | | | | | | |
| C016 | Item Management Code | | | | | | |
| C020 | Item Management Justification Code | | | | X | | |
| D014A | Issue, Repair, and/or Requisition Restriction Code | | | | X | | |
| F089 | Acquisition Advise Code | | | | X | | |
| D017 | Demilitarization Code | | | | X | | |
| D008 | Repairable Identification Code | | | | X | | |
| F007 | Wearout Rate | | | | X | | |
| F009 | Repair Survival Rate | | | | X | | |
| F008 | Service Life | | | | X | | |
| F008A | Service Life Code | | | | X | | |
| F008B | Service Life Action Code | | | | X | | |
| F067E | Program Related Code | | | | X | | |
| F016 | Designated Overhaul Point #1 | | | | X | | |
| F016 | Designated Overhaul Point #2 | | | | X | | |
| F010E | Progressive Rework Turn Around Time (East) | | | | | | |
| F011E | Progressive Rework Allowed Off Time (East) | | | | | | |
| D016 | Alternate NIIR/ACN | | | | X | | |
| D016 | Alternate NIIR/ACR | | | | X | | |
| D009 | Application Code | | | | X | | |
| D011 | Quantity Per Application | | | | X | | |
| C006 | Units of Installation | | | | X | | |
| F001 | Maintenance Replacement Rate | | | | X | | |

Figure 1c

PROVISIONING DOCUMENTATION

BLOCK NO.

| IP | IOL Part | P | S | C | P | R | D |
|-----------|--|---|---|---|---|---|---|
| F001 | Maintenance Replacement Rate | | | | X | | |
| IP | IOL Part | | | | X | | |
| F001 | Maintenance Replacement Rate | | | | X | | |
| IP | IOL Part | | | | X | | |
| F001A | Rotable Pool Factor | | | | X | | |
| F010E | Progressive/IMA Rework | | | | X | | |
| IP | IOL Part | | | | X | | |
| F001A | Rotable Pool Factor | | | | X | | |
| F010E | Progressive/IMA Rework TAT (East) | | | | X | | |
| IP | IOL Part | | | | X | | |
| F001A | Rotable Pool Factor | | | | X | | |
| F010E | Progressive/IMA Rework TAT (East) | | | | X | | |
| IP | IOL Part | | | | X | | |
| E006 | Allowance Note Code | | | | X | | |
| | Blank | | | | | | |
| MSP | Maintenance Support Package | | | | | | |
| STD | Supplementary Technical Data | | | | X | | |
| C004C | Item Name Navy | | | | | | |
| MSP | Material Support Date | | | | | | |
| D009 | Application Code | | | | X | | |
| D029 | Application/Identification Number Activity Code | | | | X | | |
| | Blank | | | | | | |
| D011 | Quantity Per Application | | | | X | | |
| F015 | Concurrent Rework Code | | | | X | | |
| F018 | Percent Per Application | | | | X | | |
| E006 | Allowance Note Code | | | | X | | |
| | Blank | | | | | | |
| D006/D005 | NIIN Application Information Record/Supplementary/Allowance Technical Data | | | | X | | |
| C007 | Replacement Unit | | | | | | |
| C007A | Planned Maintenance Requirement Quantity | | | | | | |
| C007R | Technical Override Designation Code | | | | | | |
| D009 | Application Code | | | | X | | |
| D029 | Application/Identification Number Activity Code | | | | X | | |
| D013A | Use Maintenance Code | | | | X | | |
| D013R | Maintenance Repair Code | | | | X | | |

Figure 1d

BLOCK NO.

Figure 1e

PROVISIONING DOCUMENTATION

BLOCK NO.

| BLOCK NO. | Pre-Acceptance Test Requirement Code | S | | | | P | | | | R | | | | D | | | |
|-----------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | | P | F | C | L | P | B | I | P | I | L | C | P | I | C | N | |
| C036 | Point of Inspection | | | | | | | | | | | | X | | | | |
| F023 | Procurement Determination Procedure Level Code | | | | | | | | | | | | X | | | | |
| C039B | Non-Automated Technical Referral Code | | | | | | | | | | | | X | | | | |
| F024B | Special Program Application Code | | | | | | | | | | | | X | | | | |
| D010 | Maintenance Replacement Rate | | | | | | | | | | | | X | | | | |
| F001 | Overhaul Replacement/Retork Removal Rate | | | | | | | | | | | | X | | | | |
| F001A | Rotable Pool Maintenance Rate | | | | | | | | | | | | X | | | | |
| D013/D019 | Repair Kits Reference Numbers | | | | | | | | | | | | X | | | | |
| ASBK | Assemblies Supported by Kits | | | | | | | | | | | | X | | | | |
| C036C | TTAT | | | | | | | | | | | | | | | | |
| TTAT | TTAT | | | | | | | | | | | | | | | | |
| PTAT | C/P | | | | | | | | | | | | | | | | |
| C/P | SOH | | | | | | | | | | | | | | | | |
| AC ENG | AC ENG | | | | | | | | | | | | | | | | |
| AC SEN | AC SEN | | | | | | | | | | | | | | | | |
| BLANK | BLANK | | | | | | | | | | | | | | | | |
| C036D | Change Notice Eff. Date | | | | | | | | | | | | | | | | |
| MF | MF | | | | | | | | | | | | | | | | |

Figure 1f

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